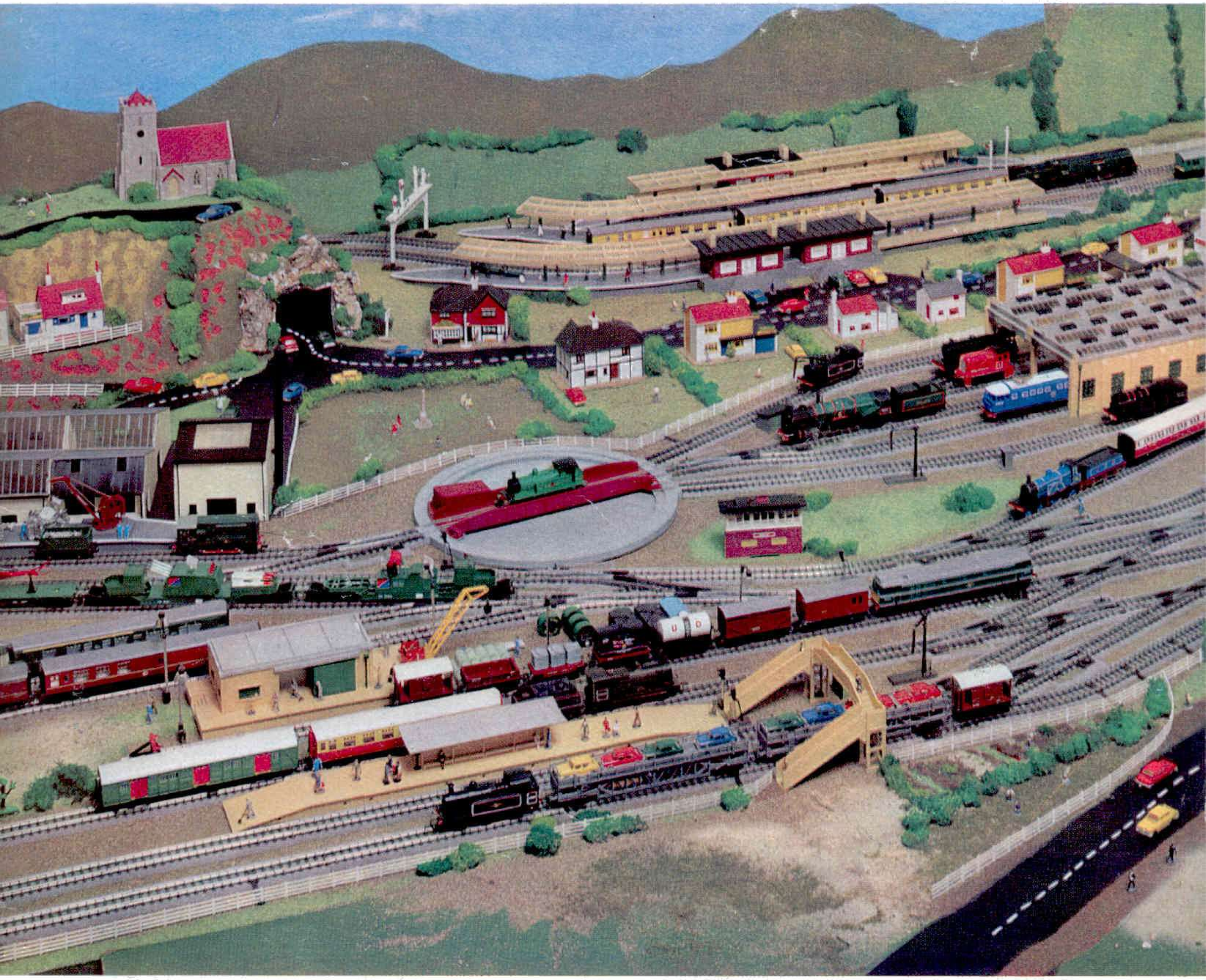
FREE – 50 Dinky Toys to be won – FREE

meccano magazine

December

1s.6d.



the practical boy's hobbies magazine

IN THIS ISSUE

- **The R-100 Airship Story**
- **"N" Gauge Railway Modelling**
- **Plastic Model Building**

1965

This little boy built a smashing 'grab' for fun– with the big, chunky pieces of new Plastic Meccano

Big bolts. Big nuts to fit them. Big spanners to fit them with. All big pieces, all *easy* pieces in new Plastic Meccano!

New Plastic Meccano is such fun for young children to play with. Because new Plastic Meccano makes it so easy for little hands to build things.

Things that *work*. Lots and lots of them. Like cranes and swings, and planes with wings. And cars and ships and windmills.

All in the brightly coloured . . unbreakable . . moulded pieces of new Plastic Meccano.

Choose from 3 boxfuls of model-making fun for younger children—

SET A **13/11** · SET B **29/11** · SET C **59/11**

Each Set complete with simple instructions for model making

AT ALL GOOD TOY SHOPS NOW

Plastic MECCANO®

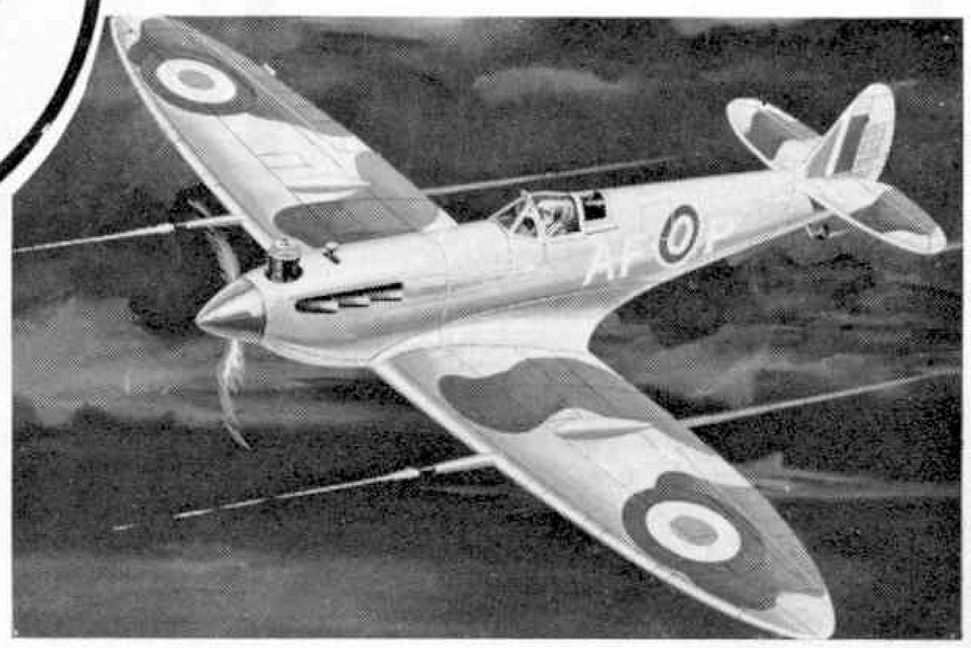
big pieces for little hands

MADE BY MECCANO LTD., BINNS RD., LIVERPOOL

THE EXCITING WORLD OF COX HOBBIES

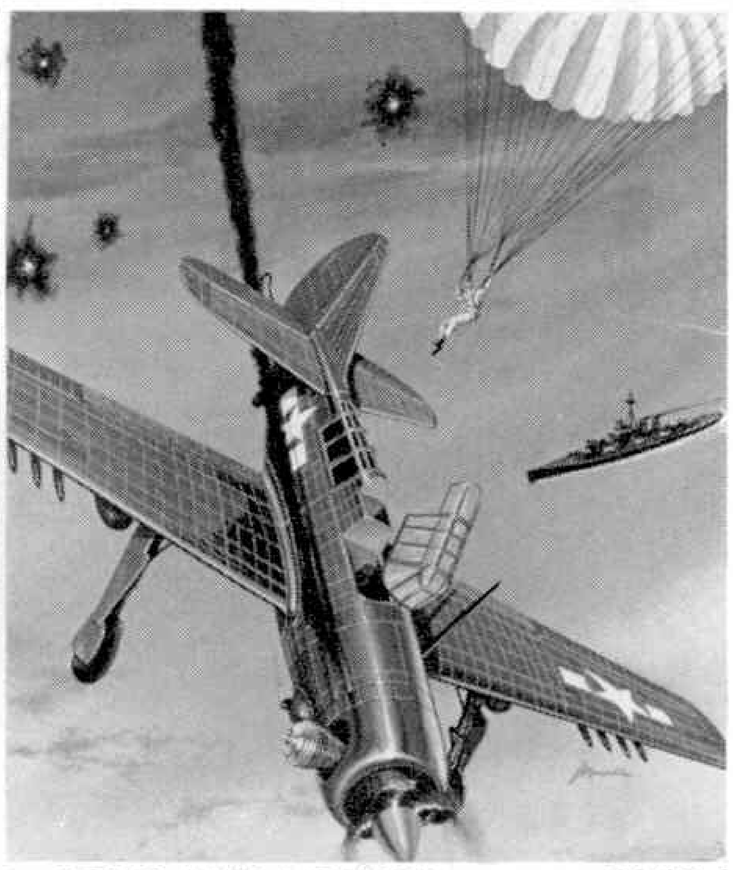
READY-TO-FLY TRUE SCALE AIRCRAFT!
READY-TO-GO TRUE SCALE CARS!
EACH MODEL ENGINE POWERED ★

★ Powered by world-famous COX ENGINES, each model is a masterpiece of precision-miniature engineering! For a NEW Model-Hobby interest, select the model of your choice from THE WORLD'S FINEST RANGE!



SPITFIRE £7.10.0

Trim, fast and manoeuvrable. Scale details include cockpit interior, underwing radiator and oil cooler wing-mounted cannon, etc. Wingspan 23″



SB2C HELLDIVER £6.19.6

Special working features include working ejector seat with parachute descent by pilot, retractable deck-landing hook for Carrier landings, etc. Wingspan 20″.

STUKA DIVE-BOMBER £7.10.0

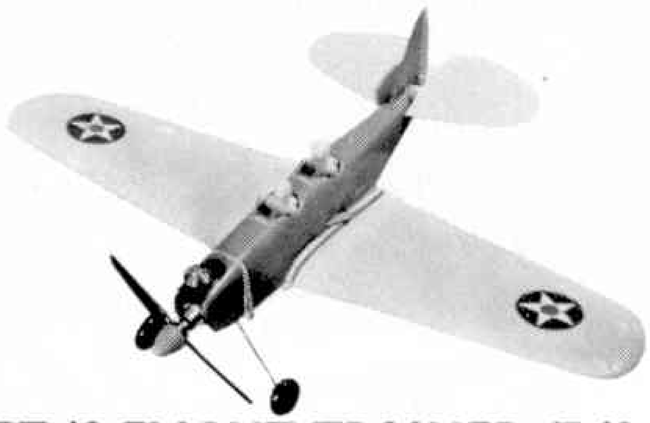
23½″ span action-packed scale model which drops bombs in flight . . . canopy opens . . . machine gun swivels . . . visible fuel gauge.

P-51 MUSTANG £6.12.0

Blueprint accurate, fabulously detailed and a wonderful flyer. This exciting model comes complete with starter battery, fuel and filler can and hose. Wingspan 16″.

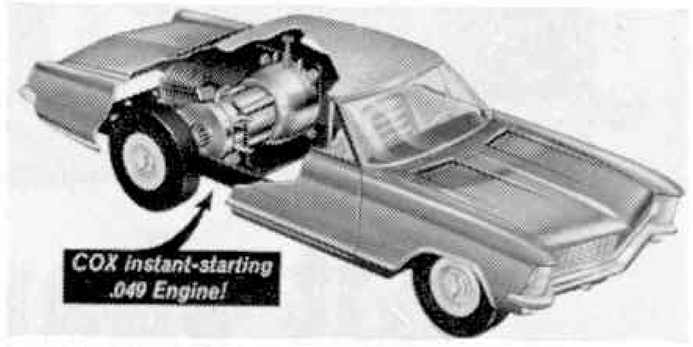
TOMAHAWK £5.19.6

20″ span model with super realism and outstanding 'fighter' manoeuvrability. Lots of scale detail.



PT-19 FLIGHT TRAINER £5.12.6

Large 22″ span with built-in 'crashproof' features for control line pilot training. Adjustable flight sensitivity for beginners up to advanced manoeuvres.



BUICK RIVIERA £5.19.0

Sturdy X-frame steel chassis with snap-on plastic body. Powerful 049 engine with reduction gear to rear wheel drive. Length 10½″.

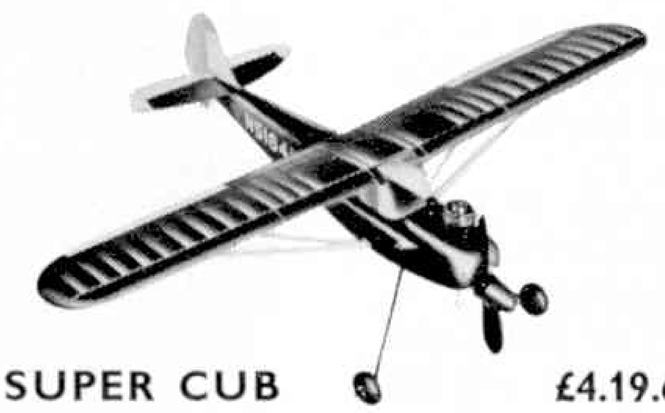
CURTISS BOMBER £6.19.6

Scale detail includes underwing rockets, landing gear doors, auxiliary tanks, authentic canopy—plus the working feature of bomb dropping in flight. Wingspan 20″.

OTHER AIRCRAFT (not illustrated)

FLEDGLING 16″ span Trainer **£3.19.6**
SPOTTER PLANE 17½″ span, length 12½″ **£4.19.6**
BENDIX TROPHY RACER 16″ span **£5.19.0**

(Full details given in the FREE Cox leaflet)



SUPER CUB £4.19.6

Superb performer with powerful 049 engine and built-in flyability. Very stable, but with manoeuvrability to satisfy the expert.

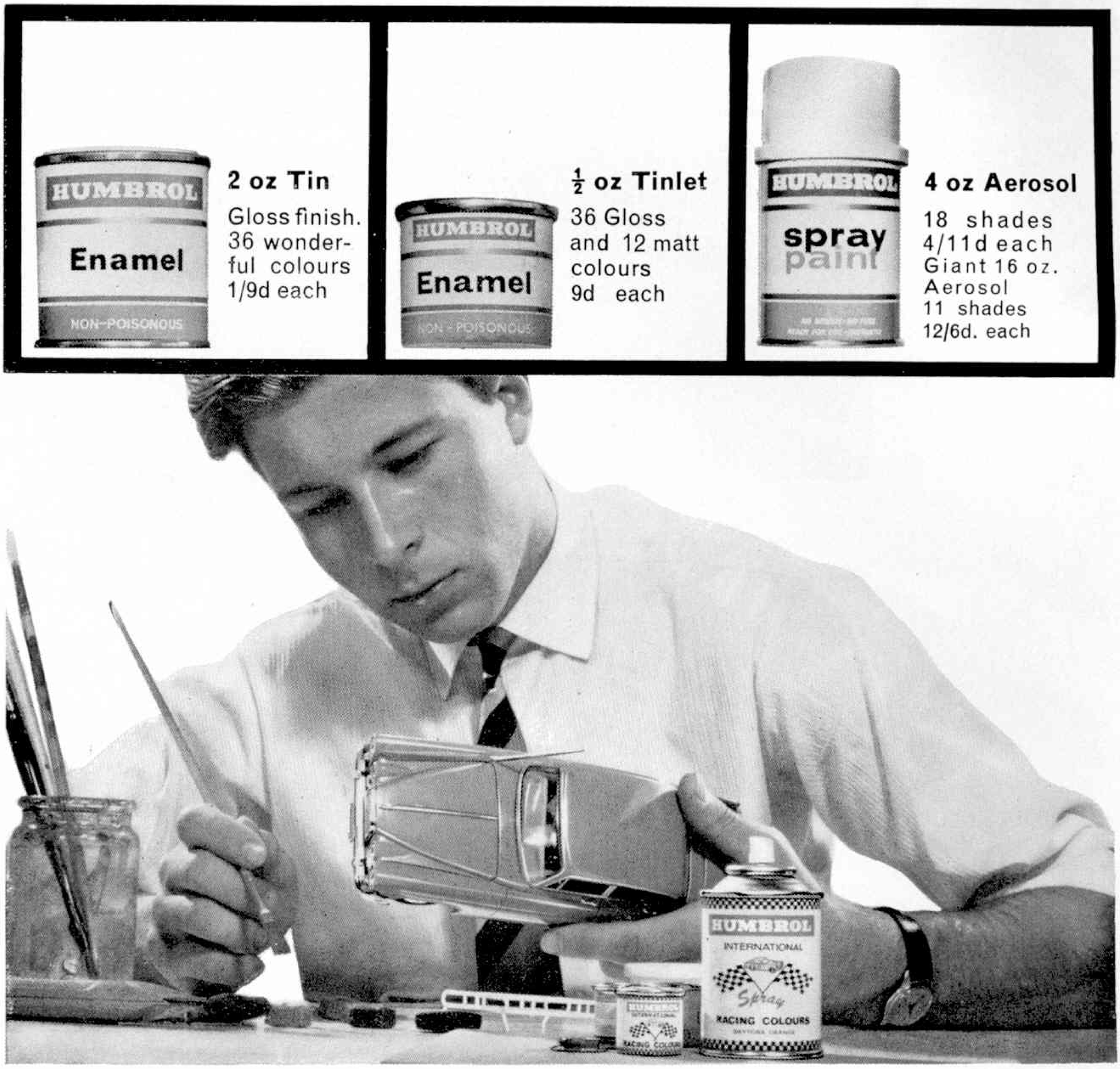
CHEVROLET CORVETTE STINGRAY £5.19.0

Superb scale beauty, fully detailed. Length 9⅜″. Dual rear wheel drive by powerful 049 engine.

also **FORD GT** £5.19.0 Exact scale model
PROP ROD £5.19.0 Airscrew driven racer

★ *See these EXCITING MODELS for yourself at all good model and toy shops—or for further information, send stamped addressed envelope for FREE 'COX' LEAFLET.*

DISTRIBUTED BY
A. A. HALES LIMITED
26 STATION CLOSE POTTERS BAR, HERTS.



Kit shape & Humbrol fashion!

It's the finish which adds that final touch of perfection to your models. HUMBROL ENAMELS, matt or gloss are used by modellers throughout the world.

Quick drying and in a wide range of intermixable colours, HUMBROL ENAMELS will meet your most exacting requirements.

They are available in the useful ½ oz. tinlet and in larger sizes. Additions to this range are the 4 oz. and 16 oz. aerosols. Now fitted with a NEW 'Soft Spray' head to give greater control in application.

HUMBROL supply a complete range of modelling products including Britfix adhesives, dopes, varnishes and polyurethane gloss and satin finish in 4 oz. and 16 oz. aerosols—Look for them all at your nearest model shop.

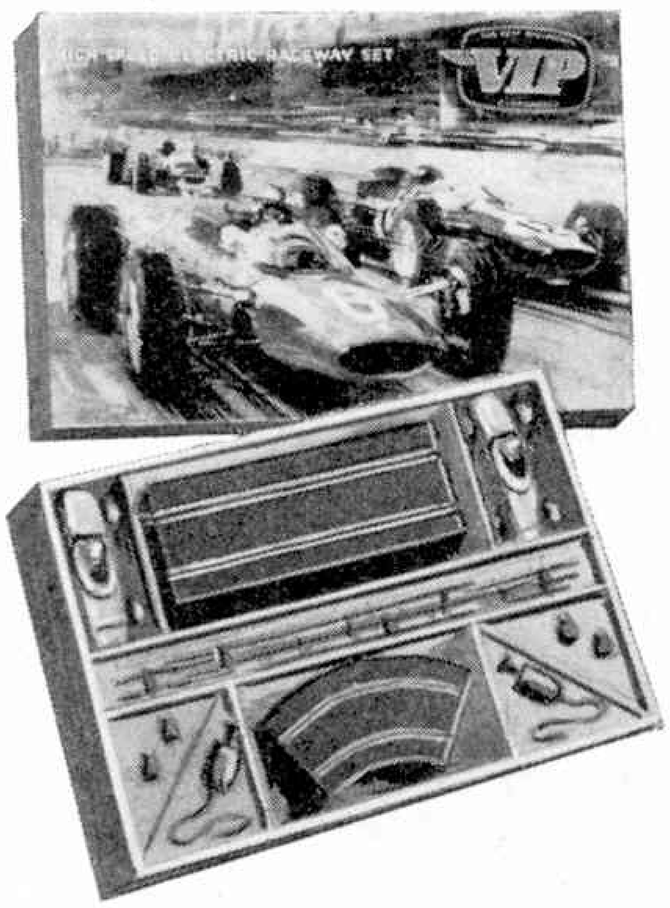
*N.B. HUMBROL ENAMELS are non-toxic, absolutely safe for children's toys.

PAINT LOCKER

Look for the sign of the Humbrol paint locker

HUMBROL enamel

Humbrol · Hull · England ·



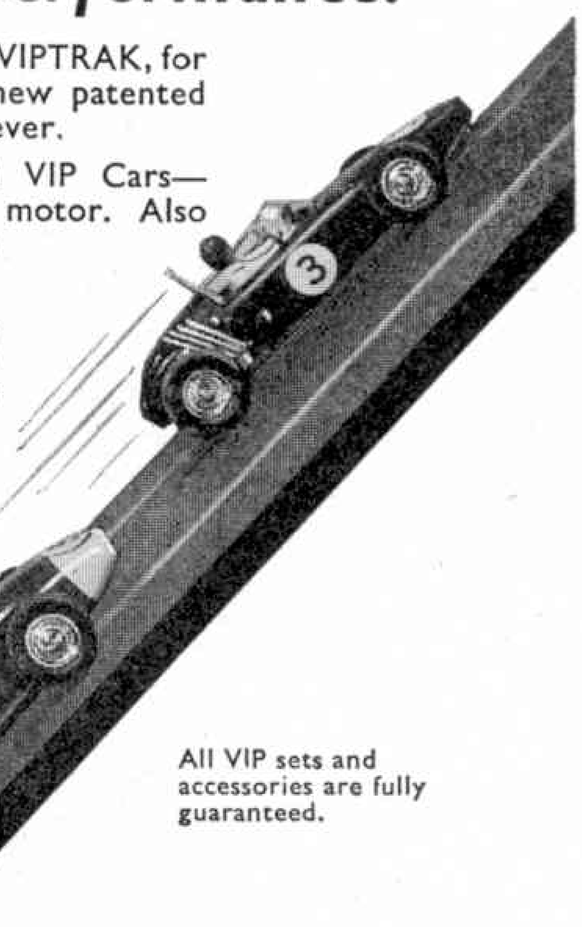
Club VIP Raceways

The finest Raceways for superior design and dramatic performance!

The new "Club" Raceway Sets, with the *new* patented VIPTRAK, for high speed and fast controlled cornering; and the new patented VIPLOK for the most positive and quickest assembly ever.

Each Set contains two $\frac{1}{32}$nd Scale Super-Standard VIP Cars—powered by the famous slim-line air-cooled electric motor. Also two Super Sensitive Varispeed Hand Controllers, with inbuilt facilities for power braking.

The new VIP "Club" Raceway Sets are the only sets containing all these features, and are acknowledged by experts to be the best engineered Raceway Sets available.



The VIPER Club

Any VIP owner is eligible for membership and Badge. Write for full particulars and Viper Gazette.

All VIP sets and accessories are fully guaranteed.

Sets now in your Model Shop

VIP SET FR. 1100
"Club" Oval Set (with VIPTRAK) 4′ 9″×2′ 5″ 2 lanes, 2 Racing Cars and "Varispeed" Controllers £5 19s. 11d. incl. P.T.

VIP SET FR. 1700
"Club" Flyover Set (with VIPTRAK) 7′ 6″×2′ 6″ 2 lanes with flyover, 2 Racing Cars and "Varispeed" Controllers. £7 19s. 6d. incl. P.T.

VIP SET FR. 1700 SPORTS
"Club" Flyover Sports Set (with VIPTRAK) 7′ 6″×2′ 6″ 2 lanes with flyover, 2 Sports Cars and "Varispeed" Controllers. £8 4s. 6d. incl. P.T.

VICTORY INDUSTRIES (*Raceways*) LTD., GUILDFORD, SURREY

Your local Music Shop sells Hohner Harmonicas, of course, but if you would first like to see the full range of Hohner HARMONICAS and MELODICAS, just ask for a free copy of the latest Harmonica Catalogue. Just off the press, it's exciting and there's a model at a price to suit EVERYONE. If your local music shop is out of stock, write to address below.

HOHNER
11-13 FARRINGDON ROAD, LONDON, E.C.1

right . . .

or wrong?

Saddle height is important in cycling. At the correct height, you should be able to touch the ground with the toes of both feet, but the ball of only one foot. You should then be able to put your heel on the pedal at its lowest point, so that when pedalling correctly your leg is always slightly flexed to avoid fatigue. In addition, the saddle must be aligned straight to the front, with the peak $2\frac{1}{2}''$ behind a vertical line through the centre of the chain wheel. Only when properly and comfortably seated can you develop full pedalling power and control your machine with ease.

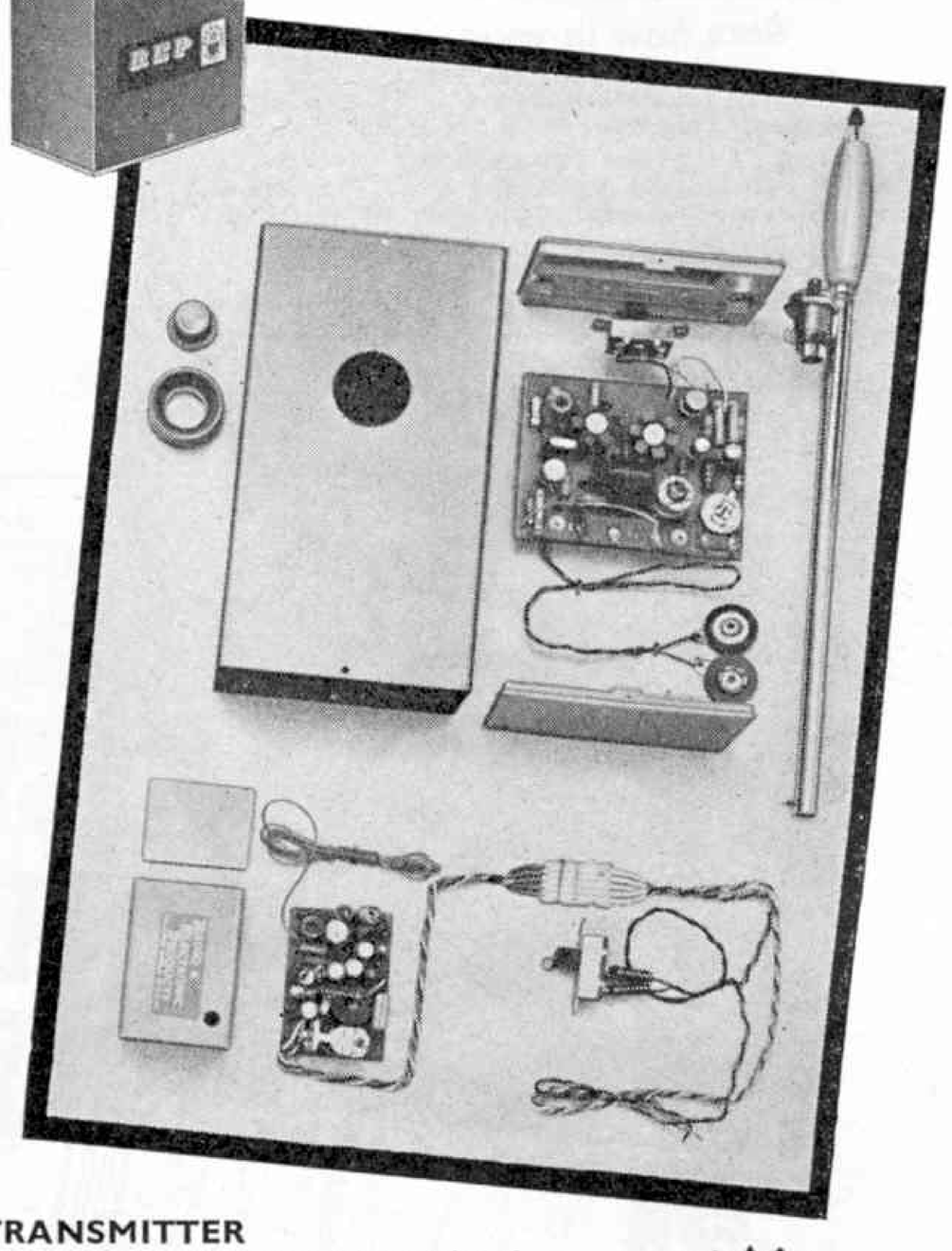
Published in the interests of safe cycling by the makers of the world's **safest** *tyres.*

DUNLOP

GEMINI single channel radio control is now available in SELF-ASSEMBLY PACKS

Much of the enjoyment in starting Radio Control is in building up your own equipment; for this reason the popular Gemini Single Channel unit is now offered in a "Self-Assembly" form.

"First time" operation is ensured by the fact that all circuits are pre-wired and thoroughly tested before despatch.



TRANSMITTER
This transmitter is transistorized and crystal controlled for high stability. The unit is light to handle and the alloy case is in an attractive anodised finish.

RECEIVER
This receiver is unique in having a tuned filter circuit which rejects interference and this gives you trouble free operation.

£13-17-8
RELAY VERSION 7/4 EXTRA

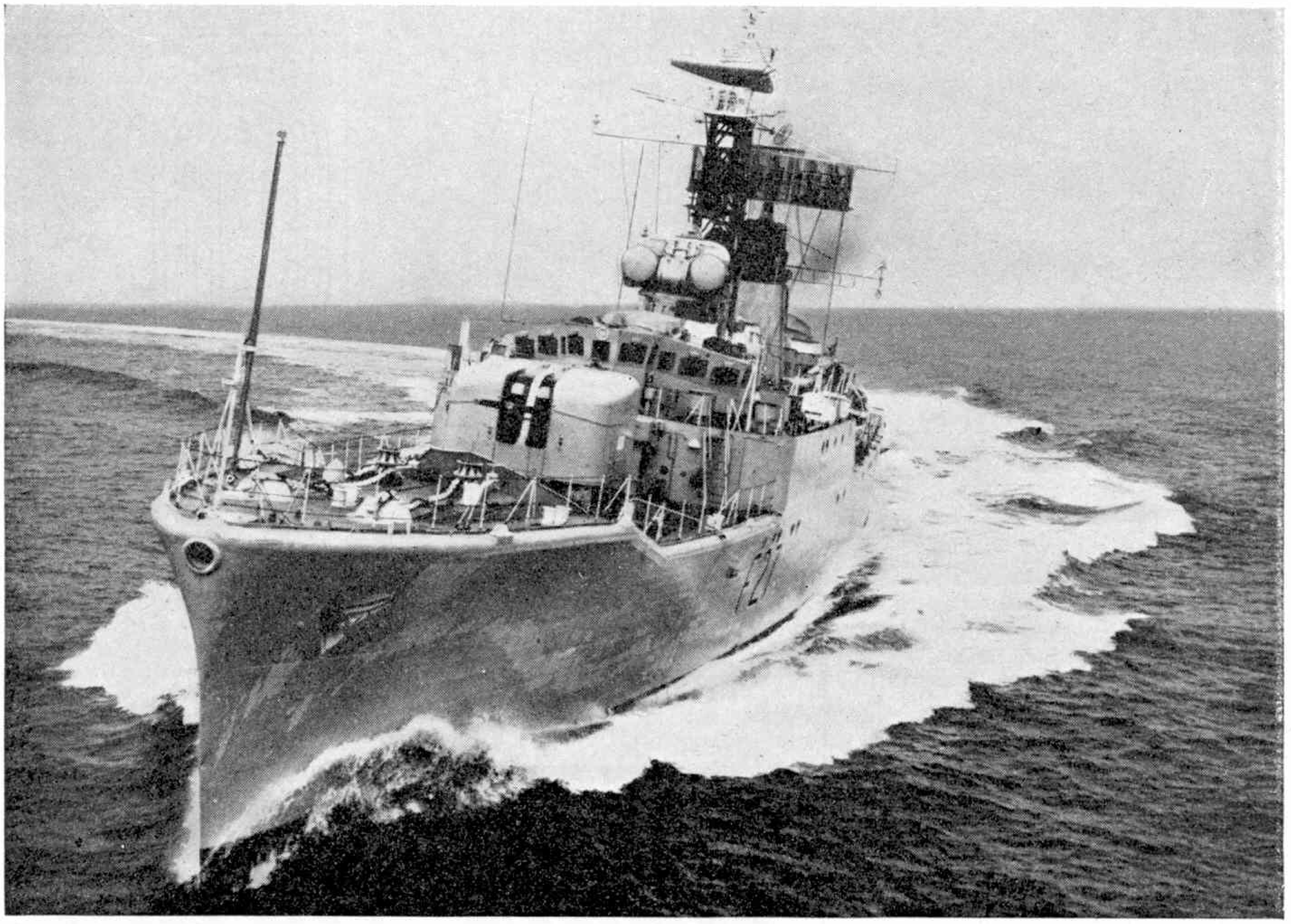
REP — DERRITRON GROUP

DERRITRON RADIO LIMITED
REP DIVISION

24 Upper Brook Street, London, W.1. Tel Hyde Park 2291

M/12/65

Does this photograph give you a feeling of pride and excitement?



H.M.S. Lynx

Then read on...

You're the kind of man we want to talk to – about the Royal Navy.

What does it offer you?

Action, excitement and adventure. World-wide travel. Sport in plenty. Fresh air. Wide-open spaces. Good food. Fine company. And up to 6 weeks' paid holiday a year. All this is yours in the Royal Navy.

Now read some facts that may surprise you. Today's Royal Navy offers you a real career. Can give you a good, solid trade. Pays well too. For example, as a married Petty Officer you can be earning over £1,100 a year. Moreover, from the moment you join, you can add another £4 a week to the value of your pay packet because you live 'all found' in the Royal Navy.

What about promotion? In the Royal Navy there isn't the fierce competition you face in civilian life. So you can really get on. How quickly depends on you – but the opportunities are there. For instance, today nearly one officer in three begins life as a rating!

Does your present job match up to this? If it doesn't (and few jobs do) find out more about the Royal Navy *now*. Post the coupon for the free booklet. Then read it–and judge for yourself. *You can apply as early as 15.*

Trades: You can train as a Seaman, Engineering Mechanic, Electrical Mechanic, Radio Operator, Artificer, Mechanician, Cook, Writer, Steward, Stores Accountant, Sick Berth Attendant, Naval Airman (ground duties), Naval Air Mechanic – or become a soldier/sailor in the Royal Marines.

Royal Navy

Royal Naval Careers Service,
Dept. QP204/B, Old Admiralty Building,
Whitehall, London, S.W.1.

Please send me, entirely without obligation, a free copy of the new 52-page booklet 'The Royal Navy as a Career'.

NAME_____

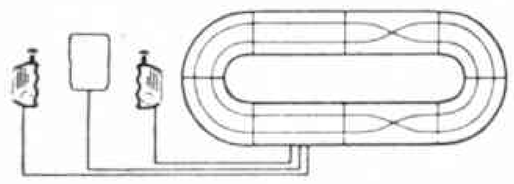
ADDRESS_____

_____

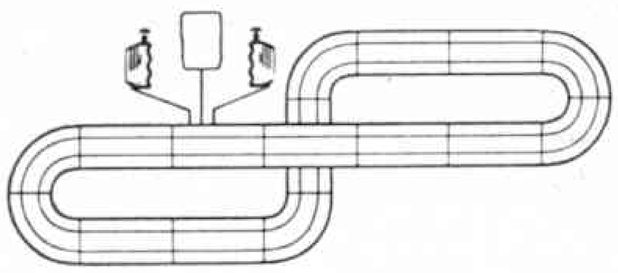
_____

Date of birth_____

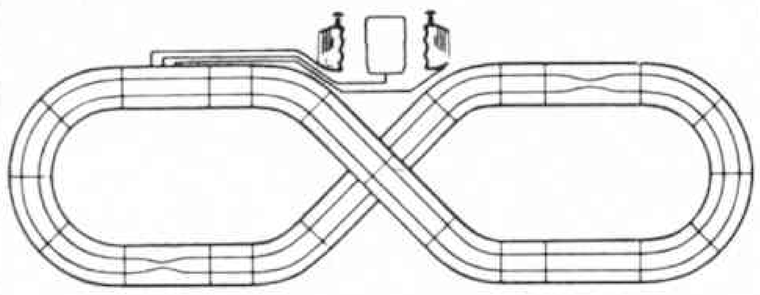
BE A CHAMPION!



X.100 Set A. 79/11 6 ft. of track using small radius (Inner) curves and two cross-overs. Area of layout—36" x 15".

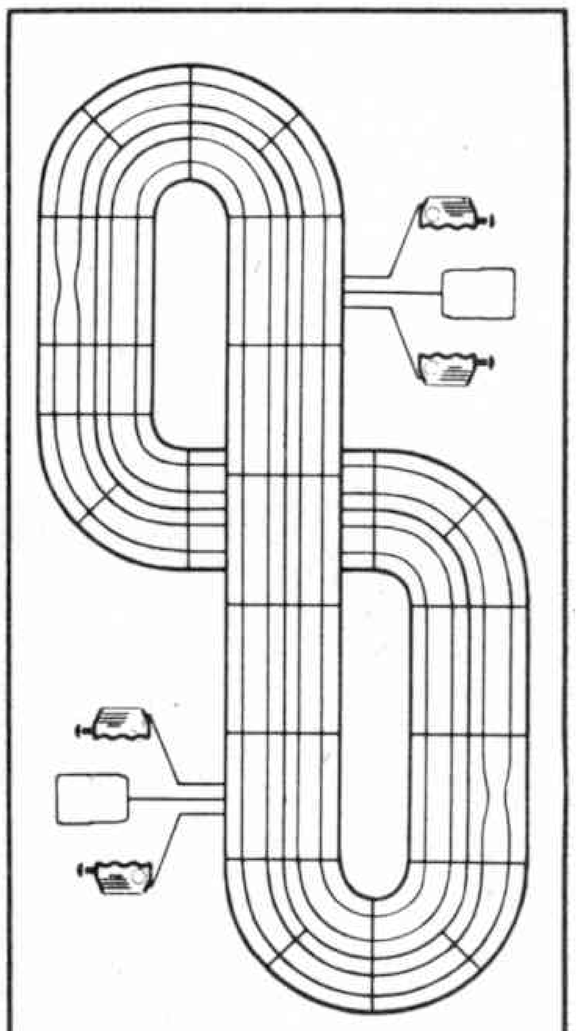


X.110 Set B. 99/11 12½ ft. of figure-8 track, using small radius (Inner) curves. Area of layout—66" x 25".



X.120 Set C. 130/- 16 ft. of figure-8 track, using large radius (Outer) curves. Area of layout—83" x 25"

WITH



Sets B and C combine to form this 4 lane layout. 28½ ft. of figure-8 track. Area of layout 76" × 40".

CHAMPION Motor racing

TRADE MARK REGISTERED

CHAMPION! That's the new electrically powered racing track system! Now you can hold exciting races with two or four cars zooming round—in your own home!

CHAMPION gives you great scope to prove your driving skill. Learn how to take bends, hills and when to accelerate along the straight. In fact, develop real driving sense and skill just like a race ace!

Choose from three strongly made CHAMPION sets. Each has two realistic models of famous racing cars with articulated steering, a complete two-lane circuit and two speed controllers.

You can build up from your first set to a four-lane racing circuit of any length quite inexpensively as CHAMPION track costs less than any other make. There's a range of low priced accessories too! Bridges, crash barriers, cars and if any car part should wear out, you can easily replace it like a real mechanic from a whole range of spare parts! And Corgi Kits and figures are ideal background settings for your CHAMPION layouts.

Race along to your local toy shop now! Go CHAMPION!

X.350 E-Type Jaguar Sports. Length 4⅛". 19/11d. Also hard top version.

X.361 Ferrari Formula 1. Length 4⅛". 19/11d. Also in plated finish. 21/-.

X.353 Mercedes 300 SL Hard Top. Length 4⅛". 19/11d. Also open sports version.

X.360 BRM Formula 1. Length 4⅛". 19/11. Also in plated finish, at 21/-

GRAND PRIX RACING AT YOUR FINGERTIPS!

Playcraft TRADE MARK

See them all at your model shop!

Editor J. D. McHard; **Design** R. S. Sodhi; K. I. Ramsay; **Advertisement Manager** A. D. B. Johnson; **Head Office** Thomas Skinner & Co. (Publishers) Ltd., St. Alphage House, Fore Street, London, E.C.2. Phone: NATional 4050. Grams: Desollar, London, E.C.2; **New York** Thomas Skinner & Co. (Publishers) Ltd., 111 Broadway, New York, New York 10006; **Chicago** Thomas Skinner & Co. (Publishers) Ltd., 35 East Wacker Drive, Chicago, Illinois 60601; **Los Angeles** Duncan Scott & Marshall Inc., 1830 W. 8th Street, Los Angeles, California 90057; **San Francisco** Duncan Scott & Marshall Inc., 85 Post Street, San Francisco, California 94104; **Ottawa** Suite 35, 75 Sparks Street, Ottawa, Ontario. © *Meccano Limited 1965*

meccano magazine

the practical boy's

hobbies magazine

December 1965 · Vol. 50 · No. 12 · Monthly

AEROMODELLING □ RADIO □ ELECTRONICS □ CAMPING □ CYCLING □ STAMPS □ FISHING

Front Cover
A busy scene created with Tri-ang Hornby trains, Minix Cars and Model-Land buildings, all convincingly arranged in a scenic setting

Contents

The Trailblazer They Steamrollered	8
Building the R.100	10
Better Plastic Modelling	12
Dinky Toys News	14
Party Time and Scalextric	16
Puzzle Page	17
This Swallow's Really Easy	18
Make it in Metal	20
N Gauge Modelling	23
And Away We Go!	29
A Book For Christmas	30
Skyline Changer	34
The Meccano Delta-Jet	36
Dinky Toys Competition	37
Have You Seen?	40
M. M. in Model-Land	42
Roll Your Own Road	46
Look to your Lights	49
Stamps	53

Ordering the Meccano Magazine Overseas Readers overseas can order the Meccano Magazine from Meccano dealers or direct from the publishers, or from the publishers' offices listed above. The subscription rate for 12 months is the equivalent of 20s. sterling at the current rate of exchange, U.S.A. and Canada $3.00.

In this, the season of goodwill, it is traditional to exchange presents and greetings with our relatives and friends. Well, of course, every month is gift time for the 50 lucky readers who each receive a free Dinky Toy as a prize in our regular competition.

But this month you *all* get something extra, in the shape of this bumper 64 page issue with its accent on things to make and do.

In addition to the regular kit and model news in "Have You Seen?" you will see that we have mentioned on page 41 two rather expensive items.

Although normally out of reach of many pockets these may be recommended as good investments in better modelling for any extra money that you may have to spend at Christmas time.

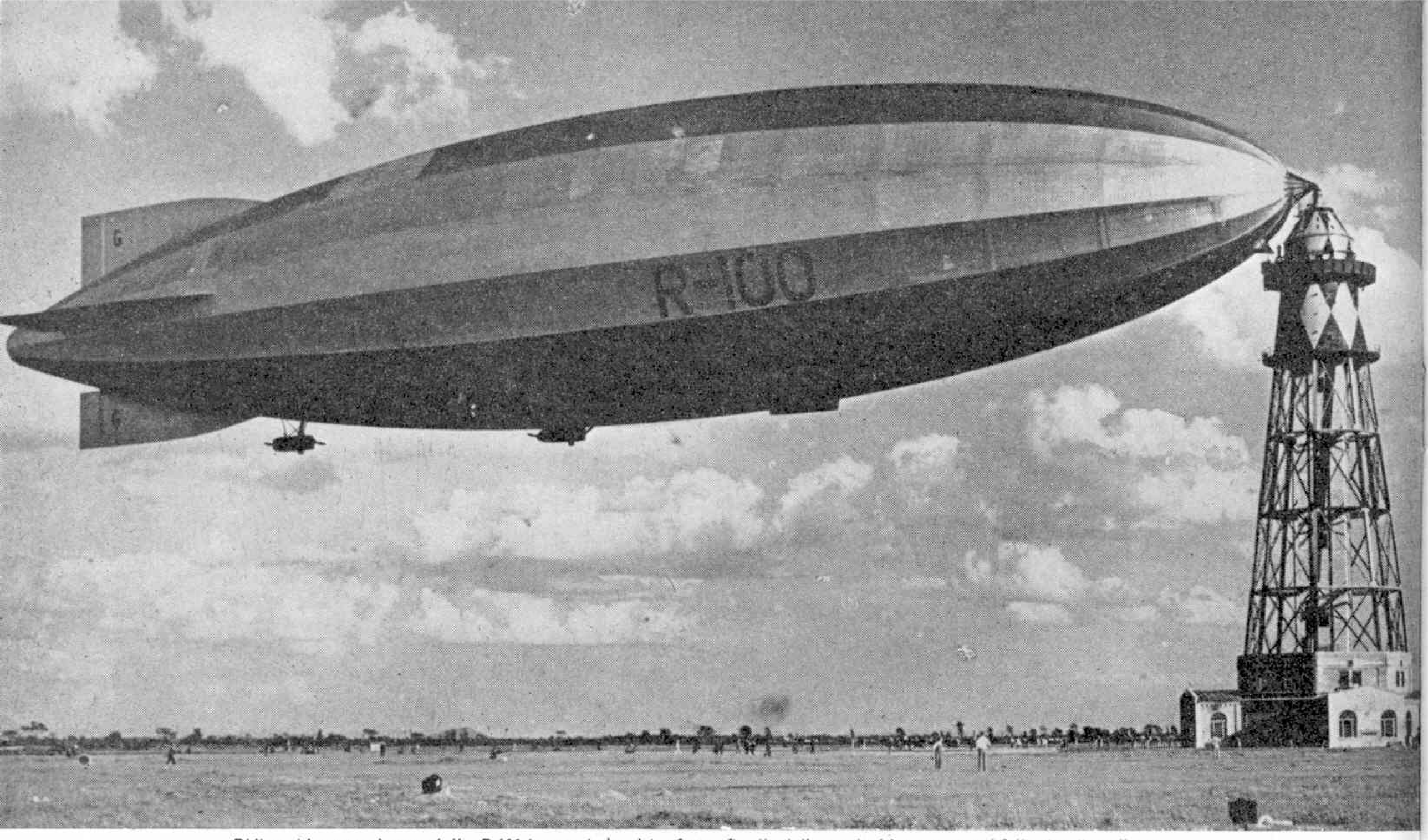
By the way, for those who have missed him, Ray Malmström will be back next month with another of his popular full size plans for a most unusual flying scale model, so get those balsa knives sharpened up!

If you're one of the thousands who attend the annual Daily Mail Boys and Girls Exhibition at Olympia—don't forget to look in at the Meccano Magazine stand on the ground floor. On it you'll find some exciting models and we're also going to give you an exclusive glimpse of some of our plans for 1966. More about this next month.

If you're near a television set on December 6th at 5 p.m., switch to any I.T.V. station and you'll see a 25 minute film on model railways. This film, called 'Go Railway Modelling' was produced by Westward Television with the close cooperation of Peco, and is a comprehensive coverage of all aspects of the hobby.

The Editor

Next Month. A *really* special issue, with a big FREE full size plan for a model power boat. Turn to page 56 for more details.



Riding at her mooring mast, the R.100 is seen in her later form after the tail cone had been removed following its collapse

the trailblazer they steamrollered

BACK in 1922, the possibility of flying from England to Australia seemed as remote to the average person as does a rocket trip to the Moon today. Three years had passed since the first airline services were opened between London and Paris, using converted bombers, but few people believed that passenger airliners would ever fly further than about 2,000 miles or faster than 95 m.p.h.

So, when Sir Dennis Burney put before the government a scheme for regular airline flights to India, he intended to do the job with a fleet of giant airships, each carrying up to 100 passengers. Such craft, although slower than aeroplanes, were able to lift much greater loads and could stay in the air 24 hours a day on long journeys. They were also safer than aeroplanes in an age when navigation and landing aids were almost unknown. In particular, they could be brought in to land gently, at a crawl, even in fog.

Just as the government was about to give Burney's Airship Guarantee Company the go-ahead to build six airships, it was defeated in Parliament. The new Labour government, under Ramsay MacDonald, cut back the order to a single airship, and decided to have a second 'ship, of similar size, designed and built at the Royal Airship Works, Cardington.

Burney's company, which was backed by Vickers, set up its headquarters on the derelict airship station at Howden, in Yorkshire. Design of its airship, known as the *R*.100, was entrusted to Dr. Barnes Wallis, who was already experienced in this work and is famous now as the inventor of the Dambusters' weapon and the Swallow "swing-wing" aeroplane.

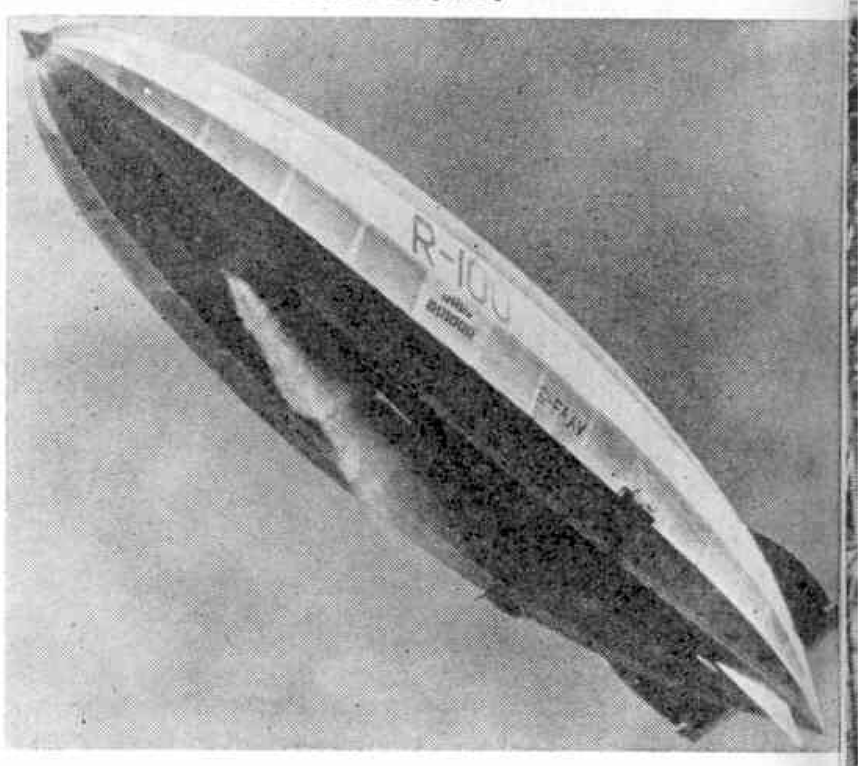
The task he faced was not easy. *R*.100 was to be twice as big as any airship flown up to that time, with a volume of over five million cubic feet. Few ocean liners exceeded her length of 709 feet, and she was to be 133 feet in diameter at the widest part of her streamlined hull. This meant that the men working on her duralumin framework had to have a good head for heights, being nearly 150 feet above the floor at times.

When completed, the airship had an empty weight of about 102 tons; but the enormous volume of hydrogen in her gas-bags gave a total lift of around 156 tons, so she was able to carry 54 tons of fuel, oil, ballast, crew and passengers.

It was intended originally to fit special engines, running on hydrogen and kerosene. When it became clear that these would not be ready in time, a switch was made to diesel engines of the kind chosen for the *R*.100's Cardington-built sister, the *R*.101. Most people believed then that petrol engines, as used in aeroplanes, were unsuitable for aircraft designed to fly to tropical countries, because of the fire risk. Hence the preference for diesel engines. However, the *R*.101 diesels were so heavy that Wallis refused to ruin the performance of his airship by fitting them, and used six 660 h.p. Rolls-Royce Condor petrol engines instead.

This was not the only difference between what became known as the 'capitalist' and 'socialist' airships. *R*.100 was simple in design and the Secretary of State for Air was asked in Parliament if he was sure that photographs of her were

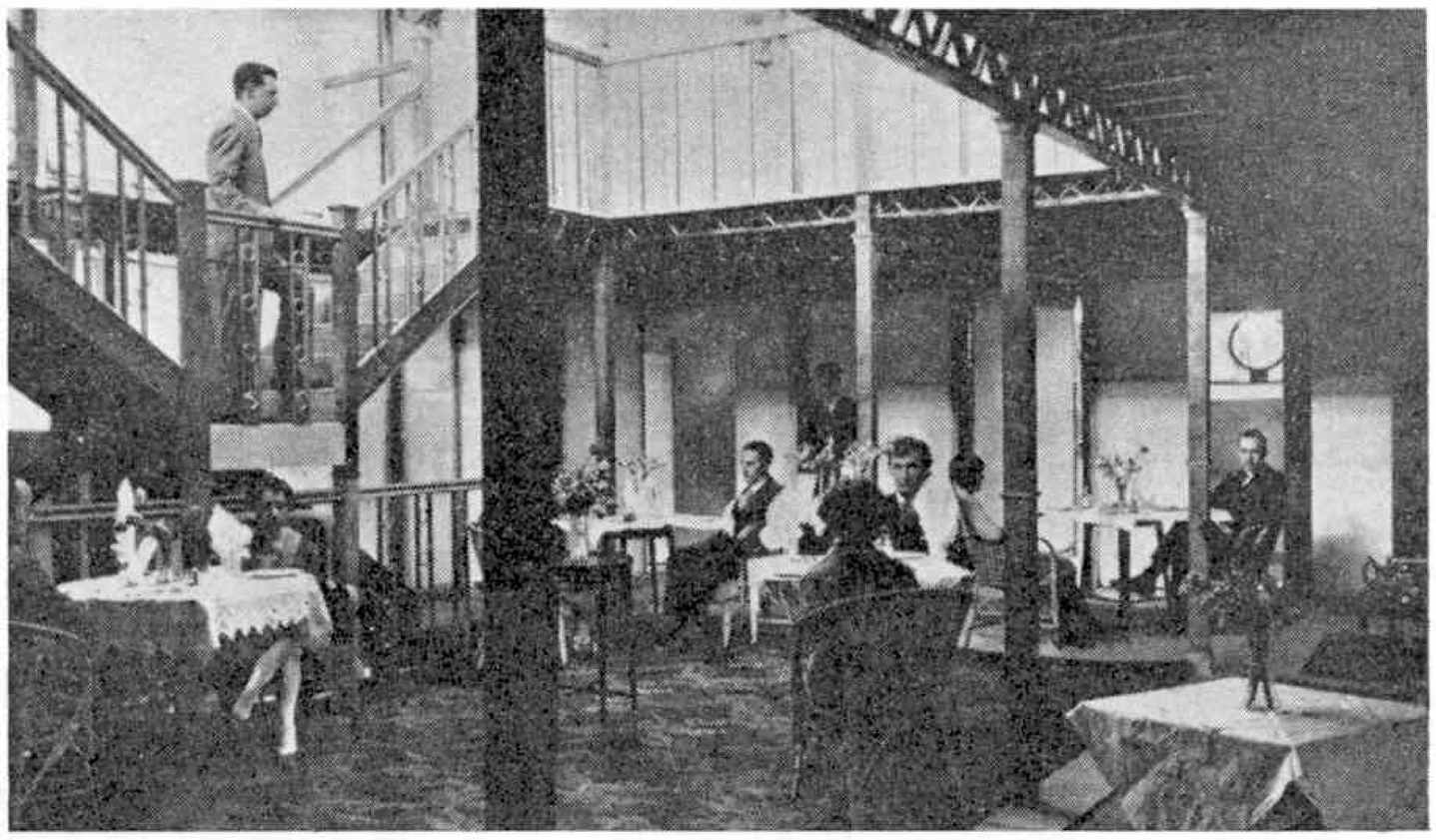
Airborne! The R.100 drops ballast to increase her buoyancy



not really 'enlargements of some schoolboy's essay with a No. 3 Meccano set'. When completed, she contained about 11 miles of tubing, five million rivets and 400,000 small bracing pieces, yet the main structure was built of only nine basic and 50 different parts. By comparison, the Cardington team put many novel ideas into their 'ship, which became an expensive, experimental research vehicle—and this probably contributed to her sad fate.

*R.*101 flew first, on October 14, 1929. She was 15 feet longer than the *R.*100, but had a total lift of 148 tons and could carry a useful load of only 35 tons, so was less efficient than her sister. She was also underpowered and proved to be about 10 m.p.h. slower.

The *R.*100 left her shed at Howden for the first time on December 16, 1929. Four hundred troops were needed to help her out, as there was only a few feet of clearance on each side. All went well, and after emptying a ton of ballast, the huge silver 'ship rose gracefully into the air for her first, six-hour, flight to Cardington. Soon afterwards, she exceeded her required performance by reaching 81 m.p.h. At that speed, the outer covering of doped fabric lifted away from the structure in a curious wave-like formation, but this was not considered serious as it did not happen at cruising speed.



The fantastic lounge of the R.100 with the famous novelist Neville Shute on the stairs. He was Chief Calculator to Mr. Barnes Wallis, Designer of the R.100

After further trials, she was prepared for her first long proving flight to Canada. It was quite an adventure, as only one aeroplane had made a non-stop east-west crossing by that date. Nevertheless, the great aircraft droned fairly effortlessly over the Atlantic at about 60 m.p.h.

The finest modern airliner cannot match the comfort that she offered. The cabins, lounge, restaurant and other passenger accommodation were located in a three-storey 'coach' inside the hull about one-third back from the nose. Large windows gave a clear view downward from the promenade decks and there was little noise, as the nearest engines were 120 feet further aft. In fact, it was so quiet that a man who snored in the next cabin could be a real nuisance at night, as the dividing walls were of fabric.

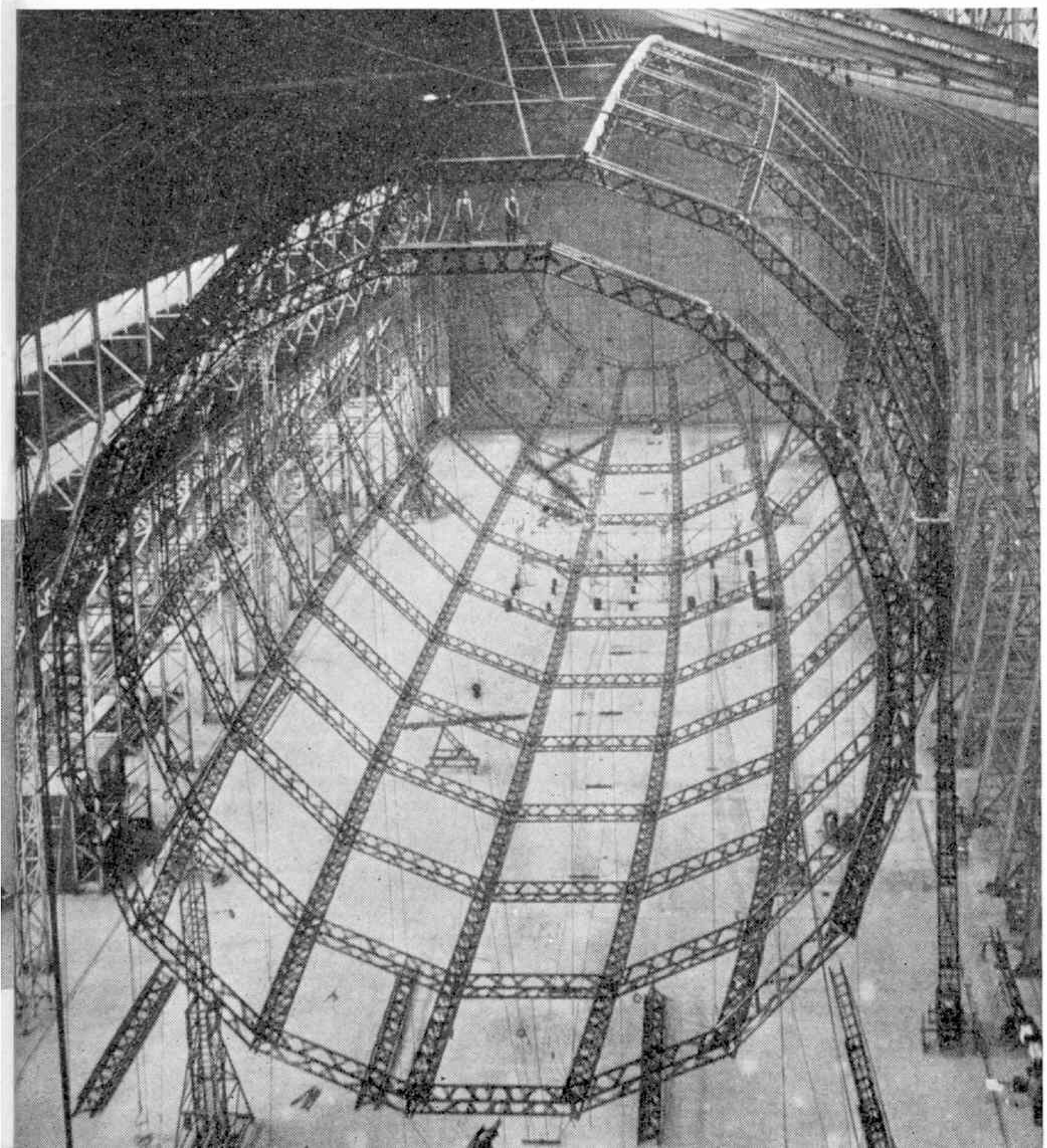
A catwalk ran the full length of the airship's interior, and it was possible to inspect every part of the structure in flight. More venturesome members of the crew could even go for a walk outside, along a foot-wide plank above the hull, from a small cockpit at the nose to a hatch near the stern. Some of them spent hours up there, sitting in the sun by the fins, when they were off duty.

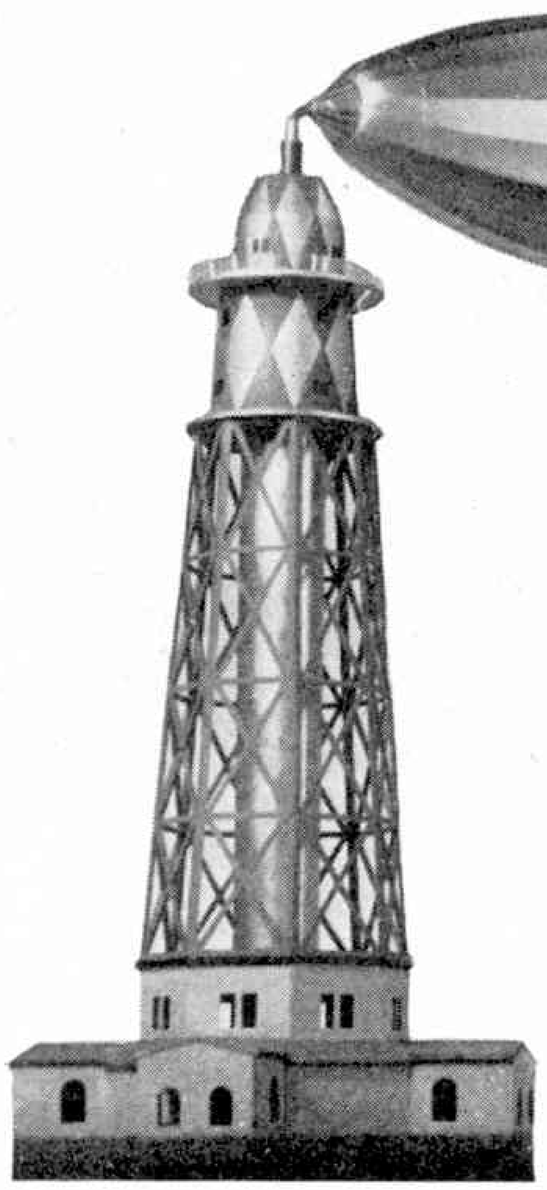
The last part of the journey was less relaxing. *R.*100 ran into violent turbulence and thunderstorms, and at one stage became 35 degrees nose-down in a strong vertical gust. The lights went out and fabric was torn off the fins, leaving a hole big enough to drive a bus through one of them. But by the time the aircraft reached Montreal, the damage had been patched by the crew.

The return trip was less eventful—but the *R.*100 was never to fly again. On October 4, 1930, her sister, the *R.*101, left Cardington on her proving flight to India. At nine minutes past two next morning, she crashed on a hillside near Beauvais, in France, killing all but six of the 54 persons on board, including the Air Minister, the Director of Civil Aviation, the Director of Airship Development and her designer. The dream of a network of airship services, linking all corners of the British Empire, died with her, for all further work on airships was abandoned in Britain. The remains were broken up and flattened by a steam roller.

John W. R. Taylor

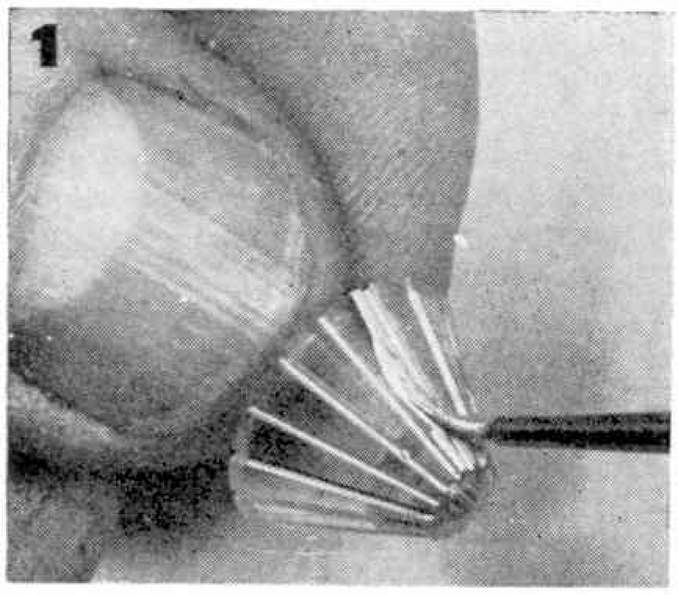
Like a huge Meccano structure, the R.100 is seen here in the assembly shed. Scale is given by the two men on the top girder piece

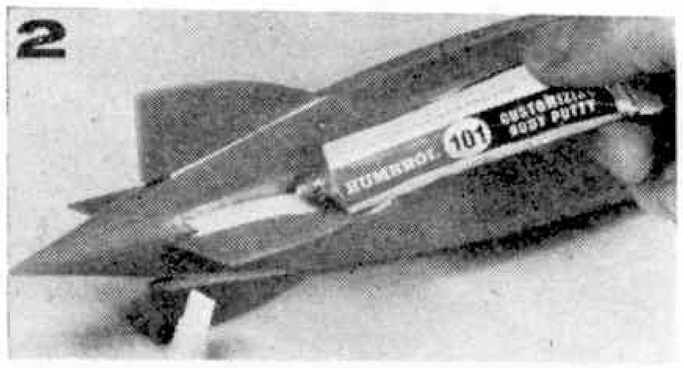


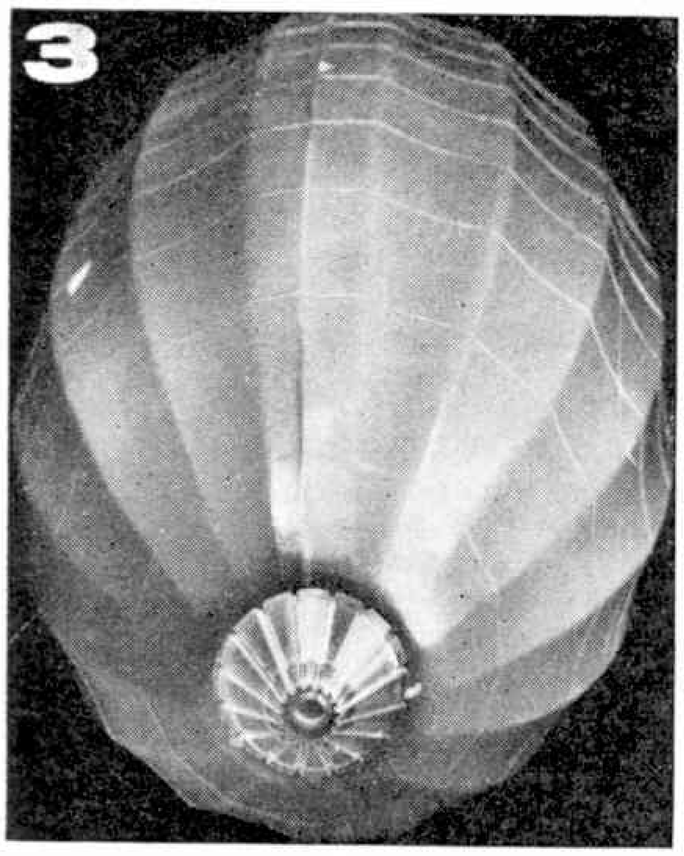


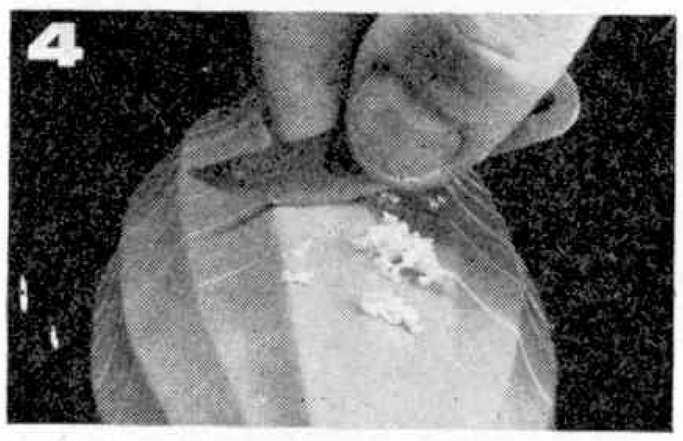
Riding at her tall mooring mast with its colourful red harlequin patterned top the Frog R.100 makes a real off-beat addition to your collection of plastics

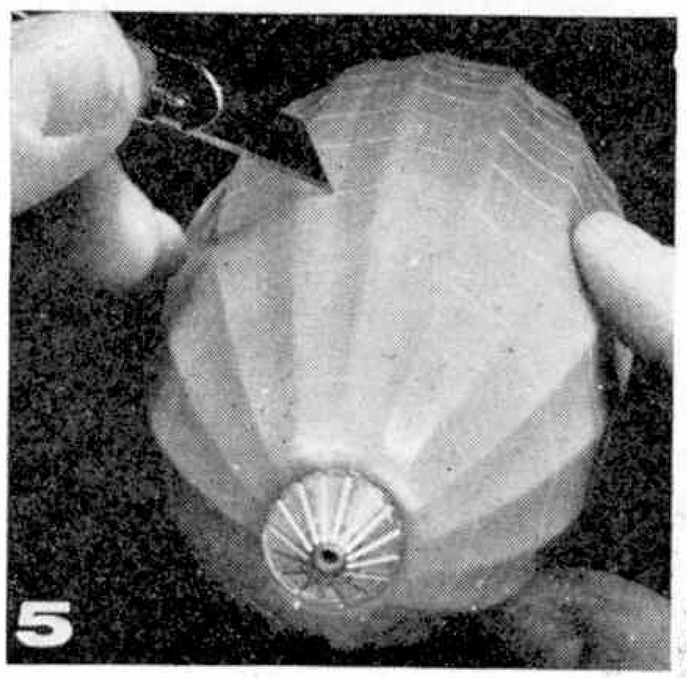
BUILDING OUR R100











1 The 'nose cone', moulded in clear plastic, represents the open girder structure of the real R.100, with deeply engraved grooves in its surface. Paint the whole cone silver and then wipe off the surface leaving the paint only in the grooves

2 Make a really smooth fairing between fins and hull by using Body Putty, spreading it fairly thickly. *When it is quite dry* use fine abrasive paper to smooth it to shape (like the top fin fairing)

3 **FOR EXPERTS ONLY!**
The two-part hull moulding process prevents the true 'concave' section being achieved between the hull stringers along the side joint lines

4 A better appearance results if you scrape the hull with a curved blade, holding the blade almost at right angles to the surface, making long smooth strokes and pressing quite hard

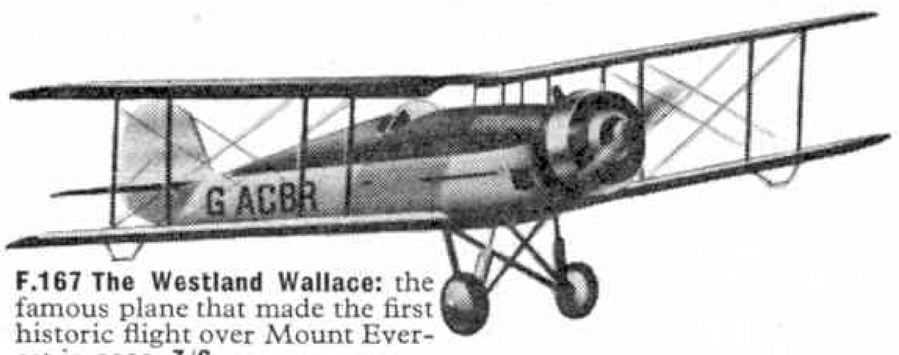
5 Do not take too much plastic off or you'll be left with a hole (body putty can be used to fill a small one). Before painting, smooth the work off with No. 400 Wet or Dry paper. Bulkhead position lines should now be replaced using a sharp knife and a ruler (C)

NOTE

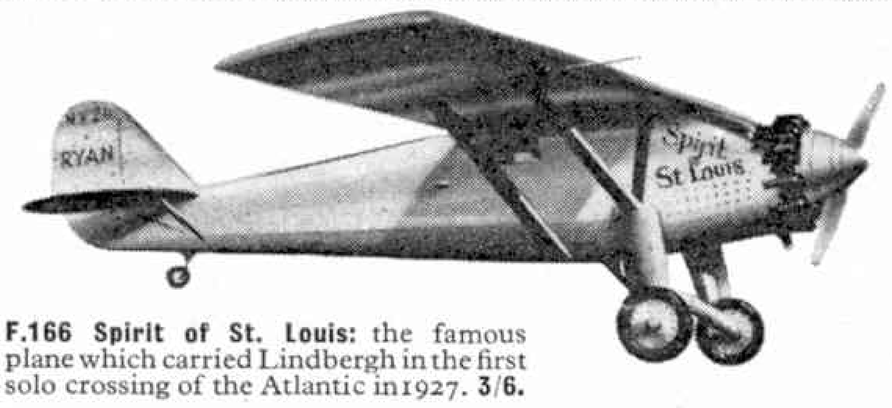
Before starting this operation be *sure* the cement joining the hull shells is quite dry—*it will need a full twenty four hours at least*

Planes flown by the "greats"
of aviation history...

THE *TRAIL-BLAZERS*

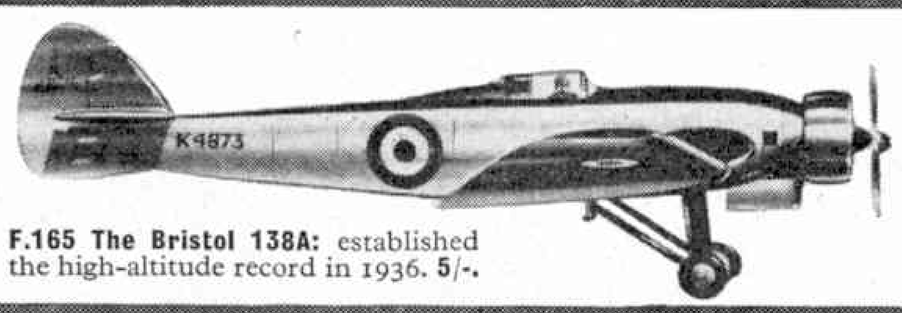


F.167 The Westland Wallace: the famous plane that made the first historic flight over Mount Everest in 1933. **3/6.**

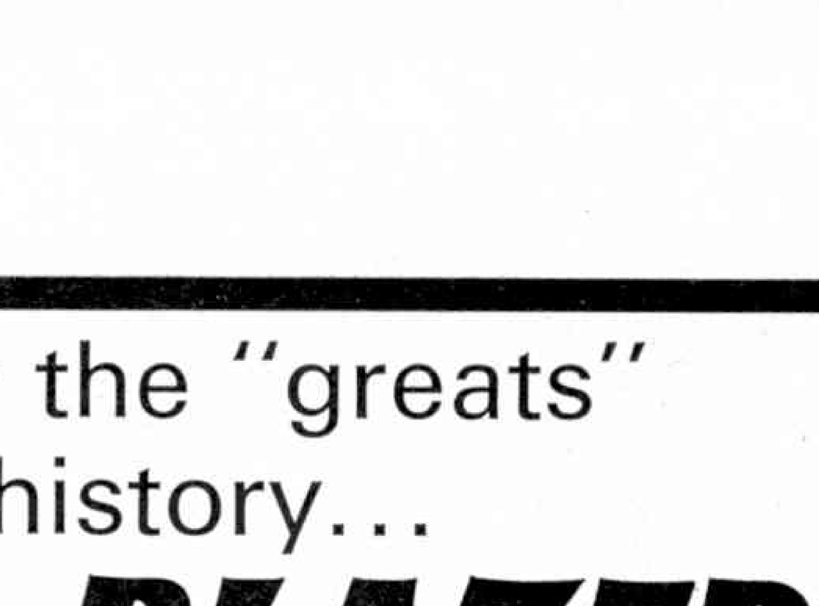


F.166 Spirit of St. Louis: the famous plane which carried Lindbergh in the first solo crossing of the Atlantic in 1927. **3/6.**

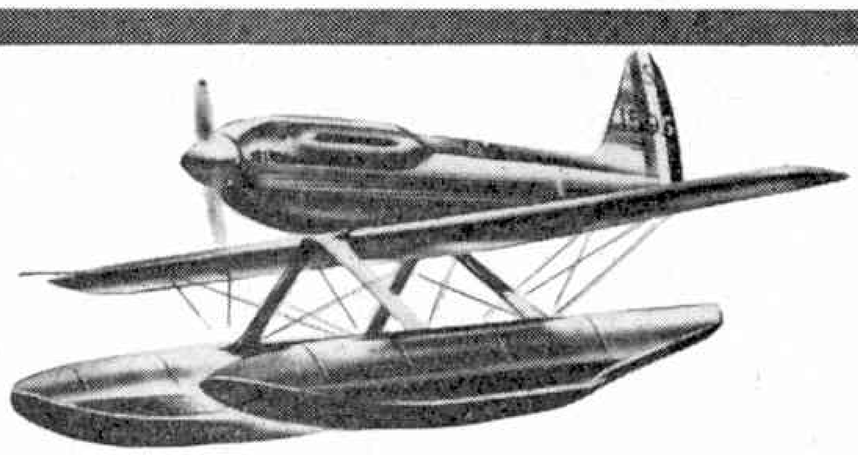
F.168 The Comet Racer: in 1934 outright winner of the England to Australia Air Race. **2/6.**



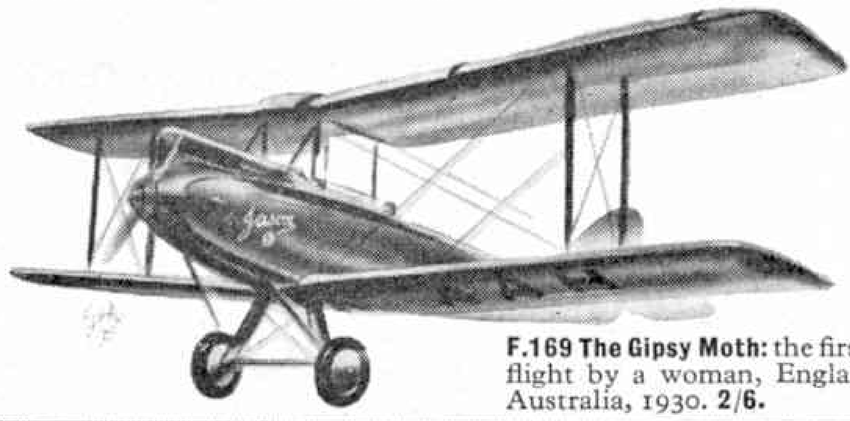
F.165 The Bristol 138A: established the high-altitude record in 1936. **5/-.**



F.163 The Vickers VIMY: the plane that flew the first non-stop trans-Atlantic flight. **6/-.**



The F.164 Supermarine S.6B: The Schneider Trophy outright winner. **2/6.**

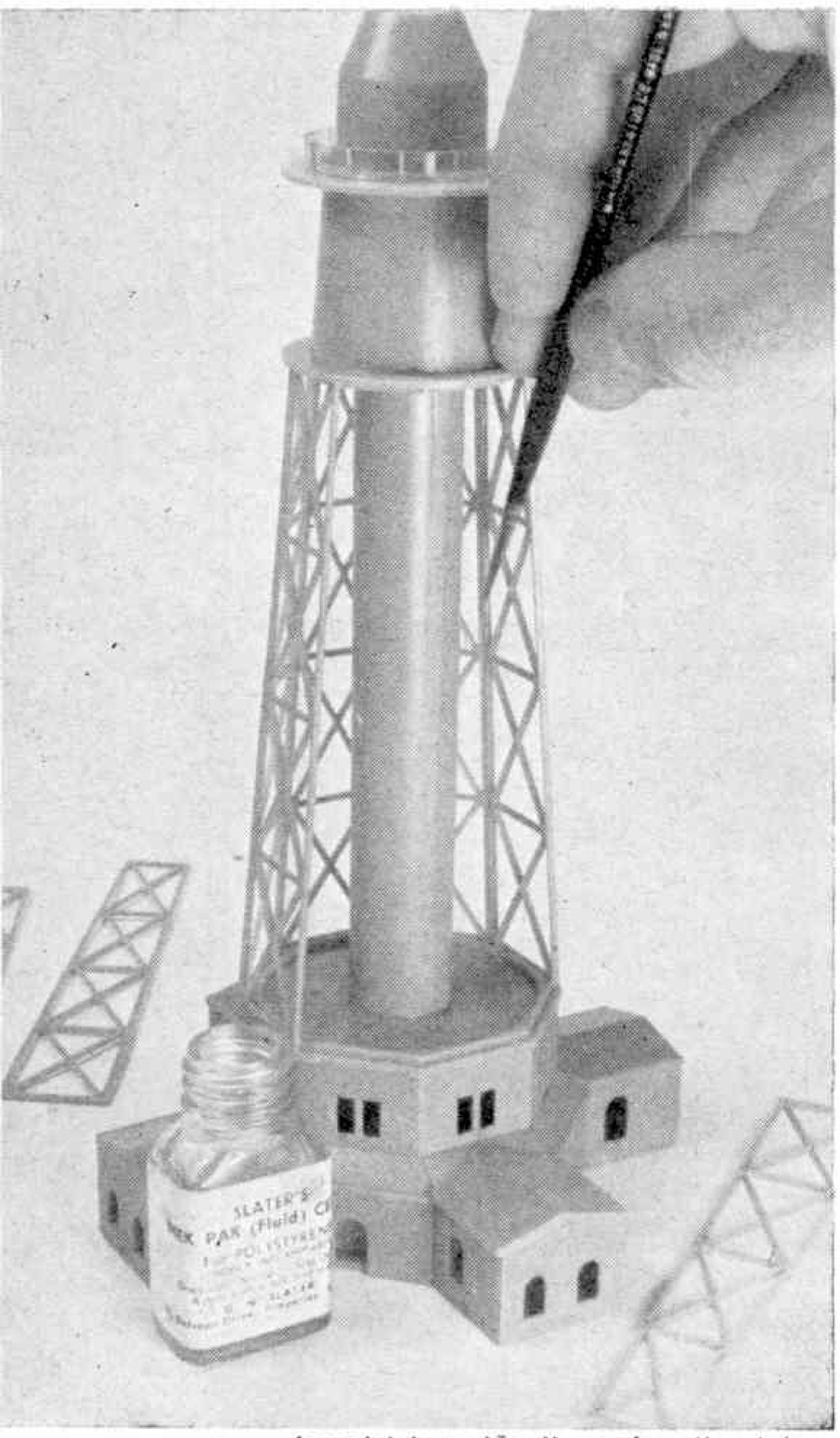


F.169 The Gipsy Moth: the first solo flight by a woman, England to Australia, 1930. **2/6.**

Which of these Frog Trail Blazer Kits have you built?
They all contain Gold Tokens for Exciting Free Gifts

FROG®

$\frac{1}{72}$nd SCALE CONSTRUCTION KITS
CREATED FROM
MANUFACTURER'S
BLUEPRINTS



better plastic building

MIKE TRESTRAIL tells how a few basic tools will help you to achieve plastic perfection.

WHILE much of the hard work has been taken out of plastic kit construction, it is still a fairly easy matter to ruin a potentially good model by careless assembly and finishing.

For this reason, a small outlay on 'tooling up' is well worth while, particularly as the equipment is perfectly suitable for the 101 other jobs that are always cropping up, and in any case a well finished model is ample reward for the few shillings spent on a basic tool kit.

My own 'workshop', used more often than not, on the kitchen table, includes a number of tools which have been tried and tested over the years and proved to give good results. A list of the more useful items could be as follows:

1. Modeller's craft knife with angled blade.
2. Four-inch flat, fine-cut file.
3. Flat, tapered, Swiss file.
4. Half round, tapered, Swiss file.
5. Pair of tweezers.
6. Darning needle.
7. Cocktail sticks.
8. Wet and dry rubbing down paper.
9. Fine-cut modeller's saw.
10. Tube of 'non-stringing' plastic cement.
11. Bottle of Slater's Mek-Pak fluid.
12. Selection of artists' brushes.
13. One cheap ½ inch paint brush.
14. Selection of *non*-cellulose based paints.
15. A piece of chipboard measuring approximately 12 inches square.

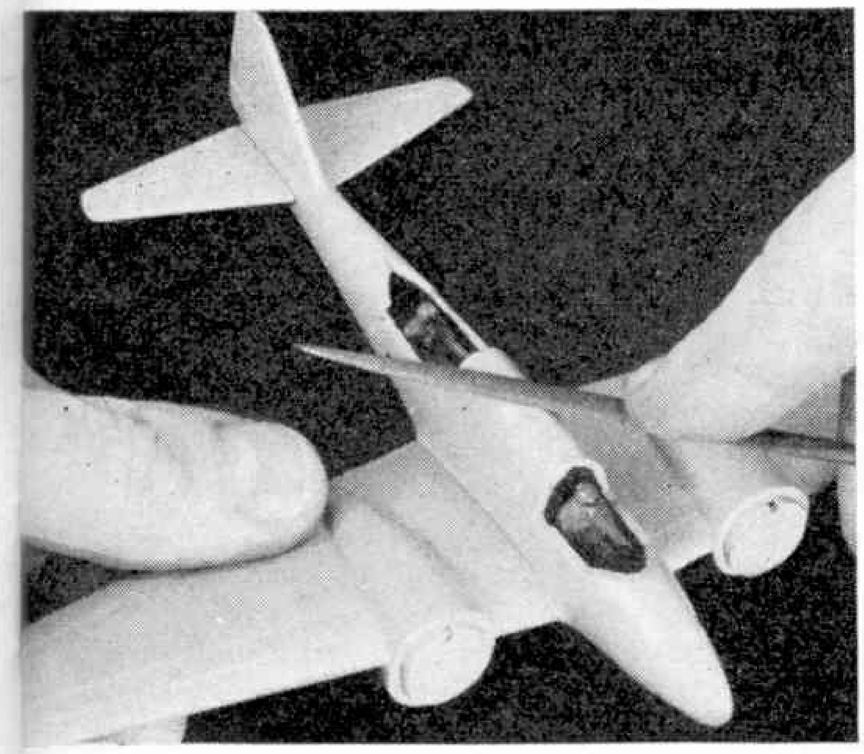
Before starting to build any kit, it is essential to have a working area which is large enough to spread the tools of our trade around and to have a good source of light. Poor lighting quickly results in eyestrain. Again, it is preferable to work in a room which has an uncarpeted floor. Even the most careful of us can drop a small 'hard to hold' component and we all know the difficulty of looking for something on a patterned carpet, not to mention the danger of losing it for ever in the vacuum cleaner! The answer, of course, is to keep all the bits in a box except the parts which are actually being assembled—at least this will reduce floor searching operations to a minimum.

Uses for the Basic Tools

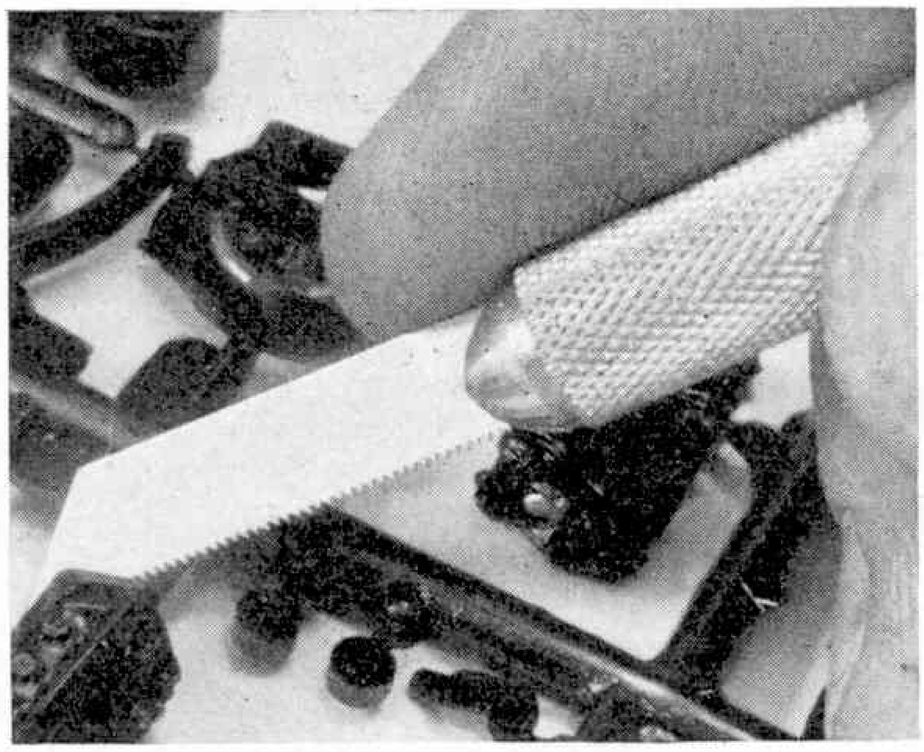
The craft knife is, of course, invaluable for cutting off components from their

1 *Long joints such as those along the girders round the Frog R100 Airship mooring mast are ideal for sticking with Slater's Mek-Pak which is applied with a small brush. Hold the parts together (dry) then just touch the joint with the loaded brush. The water-like cement will instantly spread along the full length of the joint. A union is thus achieved much more cleanly and quickly than is possible with the more usual plastic cement in a tube*

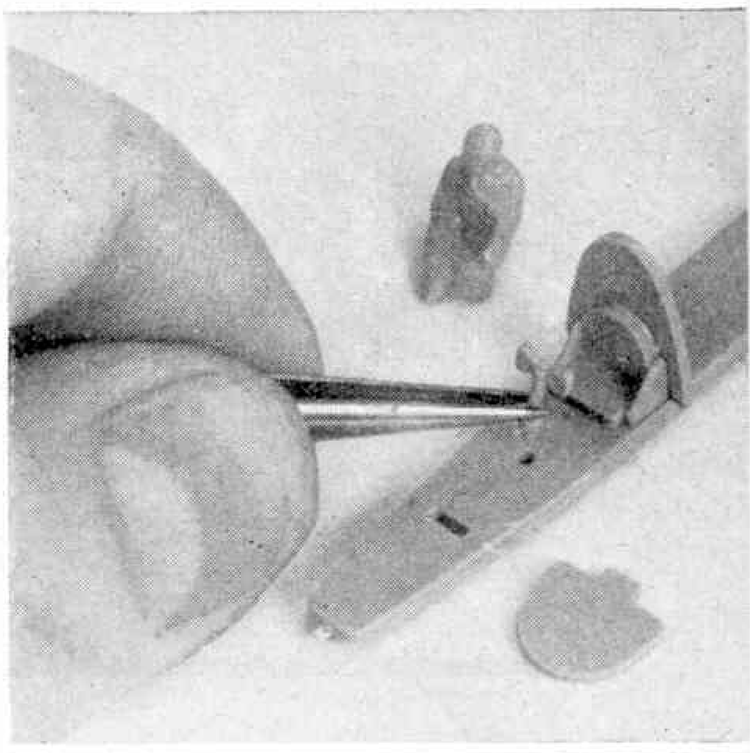
2 *TOOL Kit (left to right) Flex-i-Grit abrasives pack, tube of cement, craft knife, ½ in. dusting brush, three artists' brushes, ½ in. file, three Swiss files, cocktail stick, tweezers. Behind this line-up there's an X-Acto razor saw, two tinlets of plastic enamel and a bottle of Slater's Mek-Pak liquid adhesive*



3 *Here's the new Airfix 'Dinah' having her joints filed! Note that the cabin interior has been painted before assembly*



4 *The new X-Acto 'Mini-Saw' has many uses. Here it is being used to separate the engine parts of the Revell '56 Chevy. from the 'sprue'*



5 *Tweezers are invaluable for accurately positioning small pieces*

plastic feeder or 'sprue' as it is known, and for the many other cutting and scraping jobs that will be necessary.

When the knife is not being used, it is a good idea to pop a cork over the tip, as this will keep it sharp and, at the same time, it is a good safety precaution. The same remark can, in fact, be applied to any of the sharp or pointed tools such as files or needles—it is much better to be safe than sorry.

In certain kits, particularly where a lot of items are carried on one feeder, a craft saw is useful for cutting off without damaging the small components, after which they can be trimmed up with the knife or a fine file. The new X-Acto 'Mini-Saw' is ideal.

Included in the list of tools is a flat, fine cut, file. This is very useful for removing remnants of "flash" adhering to components and also for rough finishing a joint after two large components such as fuselage halves have been cemented together.

Final joint finishing and shaping small components can be entrusted to either of the two Swiss files, the half-round being used for filing curved surfaces. These are also suitable for cleaning up the faces of two components before they are joined with cement. As they both have finely pointed tips—don't forget to remove the cork—they make ideal 'enlargers' for gently reaming out holes which are too small. Take care, however, because the tips are very brittle and if roughly used will snap off when least expected.

Making Joints

When cementing components together, take great care not to use too much cement otherwise it will squeeze out from the joint, and worse still, find its way on to one's hands and then back on to the model where it is not wanted. For this reason a darning needle or a cocktail stick is a useful tool for applying small drops of cement on to just the right spot.

If cement does get on to the surface of a moulding, it should be left until completely hard. It is a great temptation to wipe it off, but this will merely damage a greater area of the surface and ruin all the work you have completed. Far better to leave it until the cement has dried out and then the damaged area can be gently filed smooth with a Swiss file. Where the surface is curved, the file should, of course, follow the contour. After most of the cement has been removed, a small piece of wet and dry paper should be rubbed over the work; to reduce the cutting action, rub the paper with a piece of soap to clog the abrasive grains. The area should then be polished with 'Vim' or 'Ajax' powder applied with the index finger after it has been dipped in water.

Household scouring powder is also ideal for polishing transparent mouldings such as cockpit covers and windscreens and it can be used to clean up the fuselage sheil of an aircraft after the join has been completed, the cement hardened and the joint filed smooth. Traces of the powder can be removed by washing the component in warm—not hot—water and allowing it to dry.

Joints must never be filed smooth until the cement has hardened, otherwise the plastic adjacent to the joint, which has been softened by the cement, will pull away with the action of the file.

After the joints have been completed, it is recommended that a paint brush—a ½ inch decorator's brush is perfectly suitable—is used to remove all traces of the filings and plastic dust. A small item, perhaps, but filings left behind can spoil the final process of painting and finishing.

Uses of a Jointing Fluid

Most kits include a number of small, difficult to handle, parts. To assemble these items, including cockpit covers, gun turrets, transparent nose cones and glazing in buildings. Mek-Pak fluid will be found to be the most satisfactory jointing medium.

It is best applied with a small paint brush—an old No. 3 squirrel hair brush that has seen better days and 'shaved' down with a razor until only a few hairs remain — is a suitable applicator. The component is placed in position and a tiny drop of fluid applied at the joint. Within seconds the two parts will be well and firmly fixed for good.

The fluid can also be used in place of cement for jointing any two items together, providing they are placed together and firmly held before the fluid is applied. As the brush touches the joint, the fluid runs in between the two surfaces by capilliary action in much the same way as a sugar lump draws up tea when the lump is placed above it.

Painting

Once a model has been assembled and any dust and plastic filings removed with the brush, it is ready for painting.

Non-cellulose based paints only must be used and the best quality artists sable brushes will give the best results. As these are expensive, squirrel or camel hair brushes are a good second best. After use, they must, of course, be cleaned in turpentine substitute (white spirit) and wiped dry with a piece of rag or a paper handkerchief.

Do not apply too much paint at a time, two thin coats giving a better finish than one thick coat. After painting, the model must be set aside, preferably in a drawer to prevent dust falling on the surface and when the first is thoroughly dry, the second coat applied.

If too much paint has been applied giving a heavy, uneven coat, the 'Vim' cleaner can be used again to rub it down to give a really smooth finish. The model should then be thoroughly washed down, allowed to dry and then the transfers—if any—applied, preferably with the aid of a dry paint brush to assist in placing them in position. After they have dried out a coat of either gloss or matt varnish can be applied to give the model a finishing touch and to hold the transfers firmly in position.

3 of the best

✻ REVOLUTIONARY LORRY
✻ ITALIAN STATION WAGON
✻ RAC PATROL VAN

By CHRIS JELLEY

WITHOUT doubt, the standard of die-cast modelling has improved enormously in recent years and, in nearly every case, Dinky Toys have set the trend. It is hard to believe that as little as five years ago none of the refinements, now regarded as standard on the cheapest model, were incorporated in even the most expensive replicas on sale at that time. If you thought that these were pretty basic in design, however, then how much more so would be the early pre-war Dinky Toys that were often little more than a single body casting with wheels? Who, in those days of simplicity when models with even opening bonnets were unheard of, could have foreseen a model in which the complete cab hinged to allow access to a minutely detailed 'engine'?

You may not have heard of such a model yourselves; therefore, I should explain that I refer to the Leyland Dump Truck with Tilt Cab, Dinky Toy No. 925, which would have been described in these pages last month if the space had not been taken up by my customisation article. The Tilt Cab is a good, substantial model of distinction, and 'distinction' here is definitely the right word. In fact, it is quite unique in appearance, with a wide, flat-fronted cab on the long Leyland 8-wheeled chassis—both small in comparison to the huge tipping body, pivotally mounted on the chassis. Except for the opening tailgate, which is in unbreakable Alkon, the body is diecast as a complete unit for strength and is virtually unbreakable. The hand-operated tipping movement is controlled by twin 'hydraulic' rams.

Turning, now, to the cab, this really is unique. Besides being equipped with windows, seats and steering wheel, it is hinged at the front, as I explained, so that the whole unit can be tilted forward to allow access to an amazingly detailed and plated 'engine'. Both the cab and body are held in the normal position for travelling by spring clips. Jewelled headlamps are fitted at the front of the model, which is finished in off-white with orange body and blue cab roof and wheels. Spread across the tailgate in white lettering on an orange background are the words 'Sand Ballast Gravel', together with a line of diagonal black and white stripes.

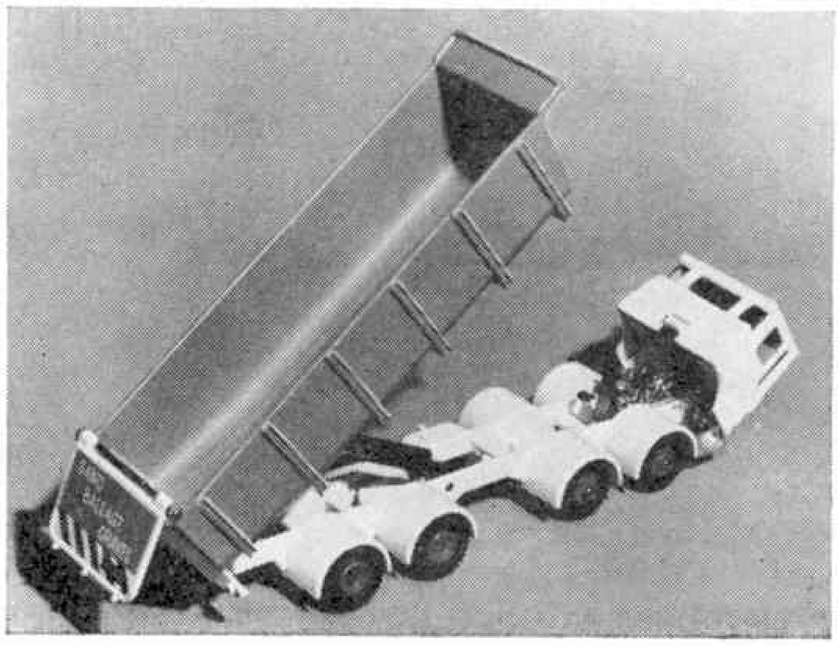
Fiat 2300 Station Wagon

The second model featured here is this month's scheduled new release—the Fiat 2300 Station Wagon, No. 172. A superb, action-packed reproduction it is, too, but before going into detail, I should like to write a little about the real-life car on which the Dinky Toy is based.

Manufactured in Italy by Fiat S.A. of Turin, the 2300 is powered by a 6-cylinder o.h.v. engine of 2,279 c.c. capacity that develops a power output of 105 b.h.p. at 5,300 r.p.m. Transmission to the rear wheels is via a 4-speed and reverse, manually-operated gearbox with synchromesh on all forward ratios. Maximum speed is a fraction over 97 m.p.h. and performance up to this speed, according to the experts, is most impressive.

In general terms, the Fiat confounds all those people who still regard station wagons as being little more than vans with windows. Not only has it a mechanical performance equal to many comparable saloon cars, but it is also smooth-running, quiet, extremely well finished and almost luxuriously equipped. Standard fittings include, to mention a few, heater/demister, windscreen washers, a cigar lighter and a whole host of instrument dials and warning lights, the last drawing attention to such things as choke, handbrake on, low fuel, direction indicators, oil

✻ REVOLUTIONARY LORRY



ITALIAN STATION WAGON

pressure, ignition, lights and doors open.

One feature which, while being of little actual importance, I found particularly interesting is the horn. A switch under the facia changes its note from a gentle toot to a loud, blaring blast—very useful and something entirely new to me! Like all station wagons, the back of the rear seat folds down to increase the luggage area in the back. The backs of the separate front seats, incidentally, are fully reclining, each controlled by a catch at the side.

While collapsible rear seats are standard on real-life estate cars, they rarely appear on miniature, die-cast examples. Dinky Toys, however, have succeeded in fitting this very feature to their version of the Fiat 2300 and what is more, the position of the rear seat-back is governed by a small lever underneath the model. Access to the resulting luggage space is through an opening tailgate which is in two sections, the top opening upwards and the bottom dropping downwards.

Other features included are opening bonnet, covering a detailed 'engine', twin jewelled headlamps, windows, full interior fittings, number plates and, of course, Prestomatic steering and 4-wheel suspension. Add to this the fact that Meccano Limited are laying a new emphasis on their undoubted ability to reproduce, to scale, all the general external features of any vehicle, and you have an excellent miniature, well worth adding to your collection.

RAC Patrol Van

Released with the Tilt Cab was a B.M.C. Mini-Van finished in Royal Automobile Club livery and carrying Sales No. 273. Like the existing Dinky AA Mini-Van, the RAC counterpart is fitted with opening rear doors, windows, seats and steering wheel plus Prestomatic steering and 4-wheel suspension. The general colour-scheme of deep blue with white roof is off-set by white RAC 'Road Service' slogans on both sides and the rear doors of the model. A similar slogan appears on a small blue headboard mounted on the roof.

The Royal Automobile Club, the oldest motoring club in the Commonwealth, began in 1897 as the Automobile Club of Great Britain and Ireland, receiving its present title ten years later at the command of King Edward VII. It was not until 1910, however, that the forerunners of the now famous Patrols appeared, when guides who had expert local knowledge were appointed to help members of the Club on tour.

In those early days the Patrolmen used bicycles — nowadays they are mounted on high-powered motor-cycle combinations or drive the increasingly popular B.M.C. Mini-Vans, often equipped with two-way radio. For a Patrolman, who is expected to work all the year round in all weathers, the vans must be a tremendous advantage. The man himself is 'just an ordinary chap' with a certain specialised knowledge of motor cars, motor-cycles and scooters and of the roads which comprise his 'beat'. He carries maps, tools, first-aid kit and fire fighting equipment, all enabling him to be of special help to RAC members who may be lost or otherwise in trouble. In addition to performing this valuable service he must also make regular reports on weather conditions in his locality so that the RAC can provide a round-the-clock weather conditions service both for members and for the Press. Overall, the Patrolman's work is exacting and often far from easy.

RAC PATROL VAN

SCALEXTRIC AT THE PARTY

by PITMAN

IN previous articles we have discussed the care of cars and the setting up of buildings; now we must talk about the track itself.

Badly maintained track results in poor racing and irregular speeds.

First class racing depends on the track firstly, is it well laid out, and secondly, is it well maintained? When arranging a new circuit think of the difficulties each part of it presents to each car—a large outer lane on a curve, although longer than the extreme inner, can be compensated by the fact that it can be taken at a much greater speed than the inner, which always requires careful handling. To ensure uniformity of lane lengths, put in a fly-over, either making up your own from the Banking Units or using the Fly-over Bridge. When using the Fly-over Bridge, you may find that the bend coming off the bridge is too sharp because of the gradient. This is easily rectified by continuing the slope, using Banking Units, right round the curve, as shown in the illustration below. We have now established that each driver races over the same distance.

Now let us look at the make up of the circuit. Every driver likes to open up the throttle and race his car to the limit —so we must have the longest possible section of straight for high speeds. Now come the hazards. The chicane is always an exciting part of any racing circuit—dropping down from speeds in the region of 130 m.p.h. down through the gears to 30 through the chicane tests the skill and timing of every driver. Use a chicane in your layout but don't forget that the driver who causes a crash must be replaced last.

Have you got enough track? Now is the time to be thinking about it. I am sure that your Scalextric will be in great demand over Christmas and you must have enough for Dad to show off in front of his guests.

Are you running four or six lanes yet? the more cars racing at once the more exciting is the racing, more skill is required and at the party people do not have to wait so long for their turn. Incidentally, with four and six lanes you really do need the Lap Counter. Scalextric has promised one for some time and it is now in the shops—it is simple, fitted to a standard half-straight, it records the laps on the track itself as each car passes over it.

Nothing looks more realistic than to see a number of cars dicing together, neck and neck, through the 'esses'. Try this, using curves fitted in alternate directions to make up, say, two or three 'S' bends. You will probably find that you will have to make use of the Crash Barriers as, when speeding through this kind of hazard, cars are liable to drift and even run out of tracks and the Crash Barriers do help to avoid this.

Have you tried a different start? After racing with the normal Grand Prix Start, why not try the Le Mans method? This style of starting can be employed by getting all drivers to stand back from the track. At the drop of the flag they have to move forward and take up their Hand Throttle—this also ensures that no one moves off the start line before the starter has given the signal.

At this time of the year everyone is thinking about Olympia and the Daily Mail Boys' and Girls' Exhibition. Scalextric will be there, and so will Meccano Magazine.

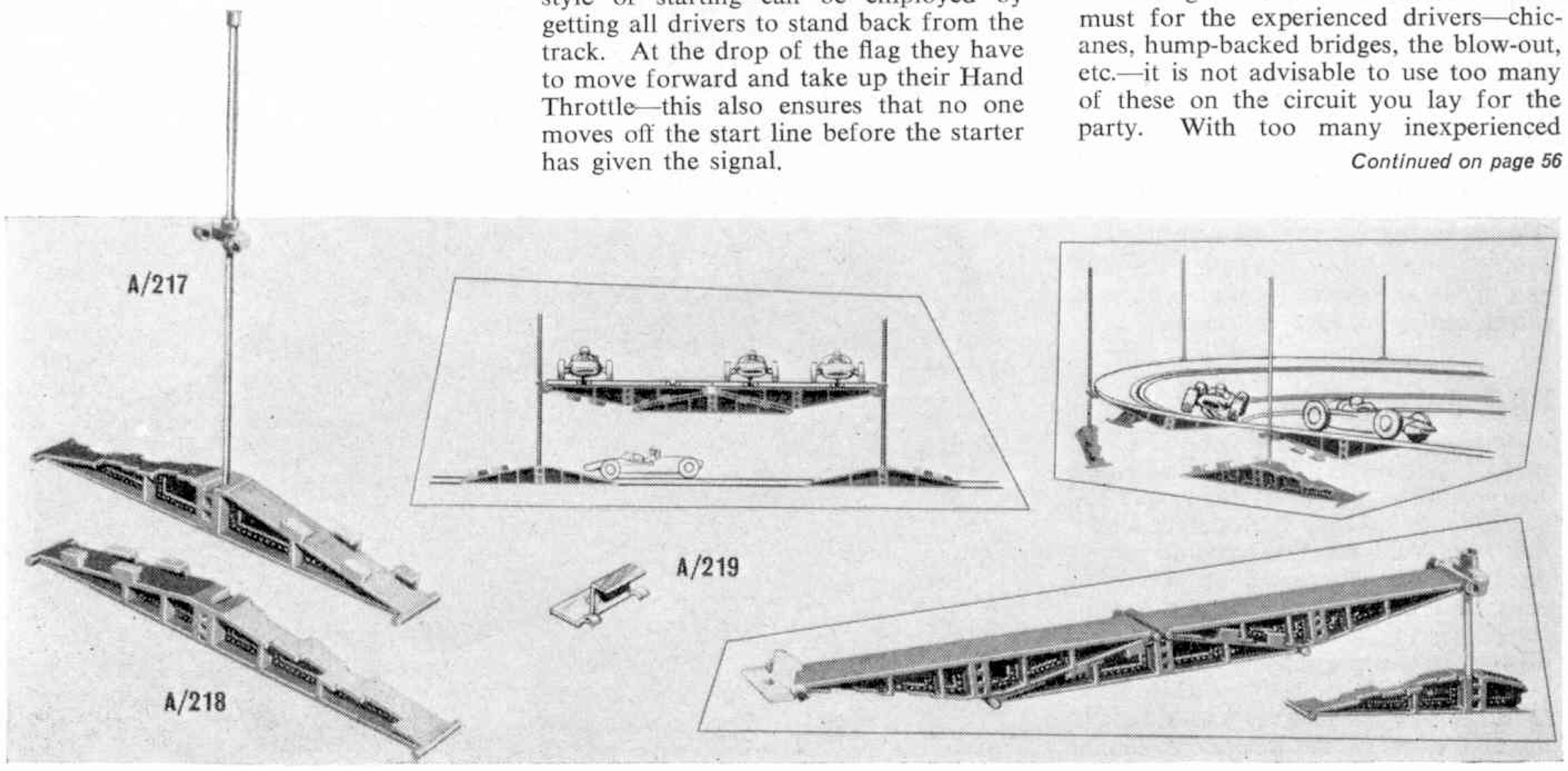
A specially designed 30 ft. long circuit has been made with eight lanes — the largest of its kind in the country. During the Exhibition visitors will be invited to compete for valuable daily prizes. This layout is something you have never seen before and terrific speeds are expected on this extremely fast circuit.

Next year the Federation of Boys' Clubs will be organising a National Championship. This will be open to several different junior organisations, with the finals to be raced in Birmingham. Although not confirmed yet, it is hoped that this will provide the entry for an International Scalextric Grand Prix run throughout the world with finals in London, but I shall be able to tell you more about this later on.

With school holidays and various Christmas parties being arranged, your layout will no doubt be in great demand, even more so than at any other time. This calls for even greater care and even more maintenance. As you may find it more convenient to lay your circuit on the floor, make sure that you use some kind of undercover—it's surprising how much dirt and carpet fluff are picked up in a very short time. Dust from the floor soon accumulates on the pick-ups, the axles and on various parts of the motor making it necessary to inspect your cars very frequently. The track itself suffers too, and the metals should be dusted frequently. Another hazard is, of course, physical damage to your equipment. Cars and track are easily stepped on at parties, so make sure that you surround the circuit with obstacles—chairs, etc.—to cut this down to a minimum, but keep a roll of Sellotape handy for body work repairs.

Although the various hazards are a must for the experienced drivers—chicanes, hump-backed bridges, the blow-out, etc.—it is not advisable to use too many of these on the circuit you lay for the party. With too many inexperienced

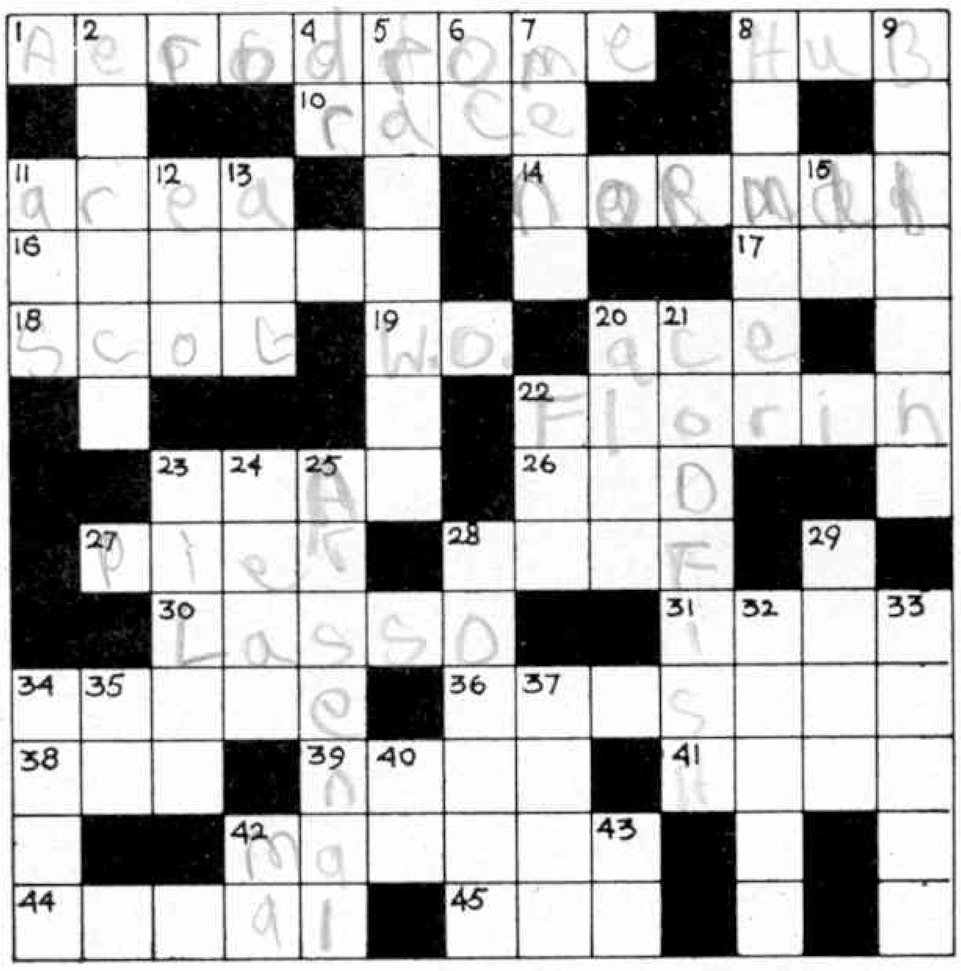
Continued on page 56



Puzzle Page

Turn to page 47 for answers to the puzzles on this page

Crossword Puzzle No. 10



ACROSS

1 Planes park here
8 Centre of a wheel
10 A speed test
11 Length by breadth
14 Quite natural
16 Sign
17 Name refers to 18 across
18 Someone born north of the Border
19 War Office (abbrev.)
20 A top card
22 Bob twice
23 Amusement
26 Money
27 Most seaside places have one
28 An uncomplimentary term
30 Cowboys use it
31 Item
34 Don't throw it
36 You might get one when walking
38 Cooking utensil
39 Girl's name
41 A home in Scotland
42 It's in the Philippines
44 Truly of the countryside
45 Nursemaid

DOWN

2 To make more wealthy
4 A doctor (abbrev.)
5 Where trains run
6 Officer commanding (abbrev.)
7 Repair
8 A tool
9 Top deck
11 An animal
12 The 'I' in everyone
13 Insect
15 Badge seen on many cars
20 As well as
21 What fish is it?
22 Girl's name (abbrev.)
23 Aero captain
24 To rest against
25 Football team
28 A mischievous sprite
29 Separate article
32 Province of New Zealand
33 Where contests take place
34 To urge
35 Preposition
37 You'd hardly call it singing
40 Above
42 A term for mother
43 Preposition

Tricky Teasers

SOCCER TEAMS

Can you find the five famous football teams given here in anagram form? Just re-arrange each row of letters.

SEAL RAN
TOWN LAMP HOVER
ROB THING
NUN'S LADDER
O I'LL PROVE

SAND PROBLEM

Try this one on your pals! How much sand is there in a cylindrical hole one foot in diameter and one foot in depth?

LETTER JUGGLERY

The letters forming the names of eight three-letter trees have been jumbled together here. Try to sort them out.

E S W O G M Y Y A L F A
R H I I K Y B A E M F A

A GOOD RECIPE

A word test, this one. Take $\frac{1}{3}$ Energy, $\frac{1}{4}$ Corn, $\frac{1}{2}$ Oust, $\frac{1}{2}$ Ragout, $\frac{2}{5}$ Ember, and $\frac{3}{5}$ Entry. Arrange these ingredients carefully in the order given, and when correctly set you will find yourself with something which helps all of us along!

CHATTER BOX

HOW to prove a cat has three tails: No cat has two tails. One cat has one more tail than no cat. Therefore, one cat has three tails.

* * *

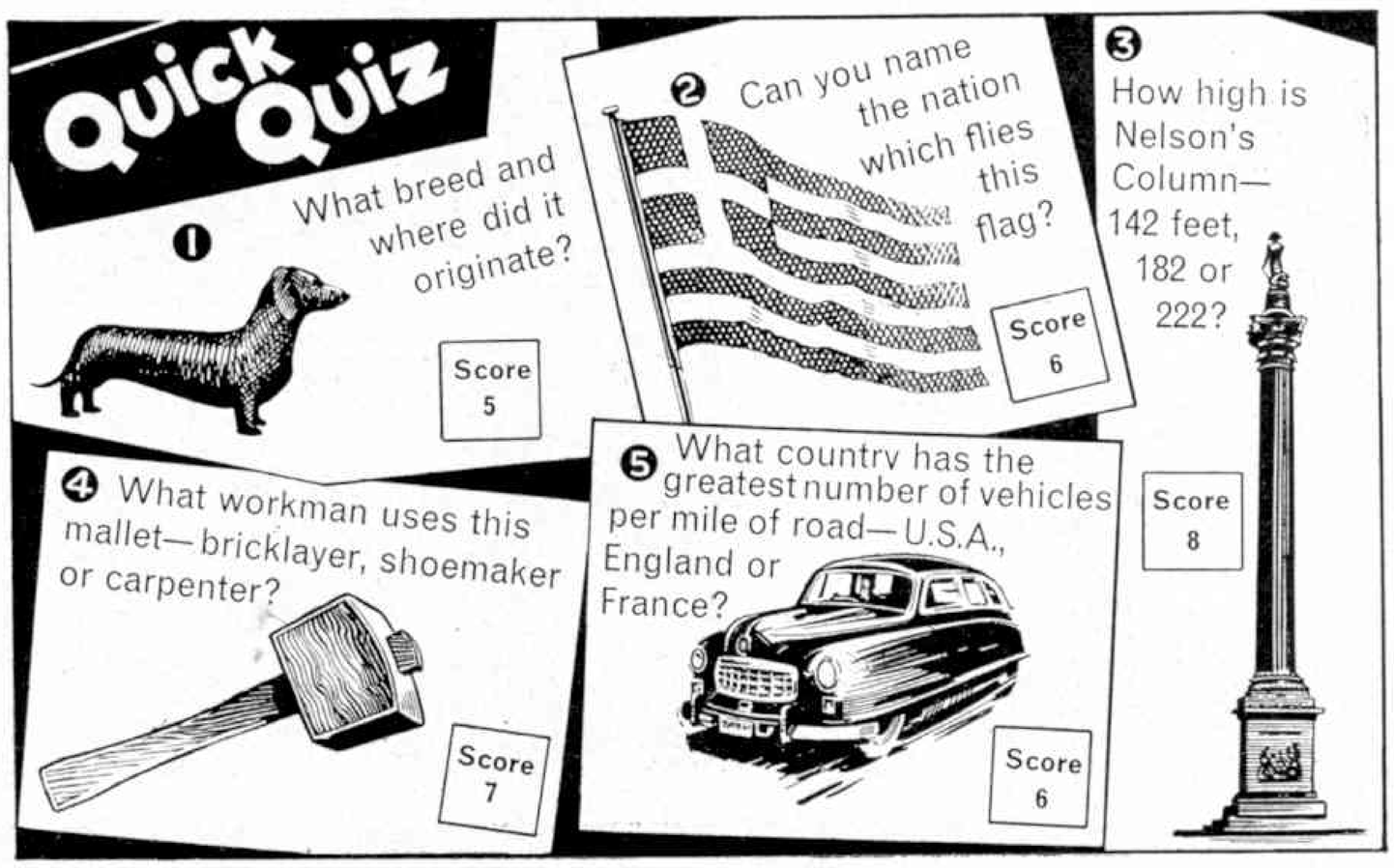
HOW did the theatre critic describe the hardworking playwright's latest effort?

All work and no play.

All Encompassing

IF AYE is 15 miles s-s-w of Bee, and Bee is 7 miles w-n-w of Cee, and Dee is 9 miles N-N-E of Cee, then, as the crow flies, Aye is 15, 25, 35 miles (choose one) from Dee.

Answer: Twenty-five miles.


Quick Quiz
1
What breed and where did it originate?
Score 5
2
Can you name the nation which flies this flag?
Score 6
3
How high is Nelson's Column—142 feet, 182 or 222?
Score 8
4
What workman uses this mallet—bricklayer, shoemaker or carpenter?
Score 7
5
What country has the greatest number of vehicles per mile of road—U.S.A., England or France?
Score 6

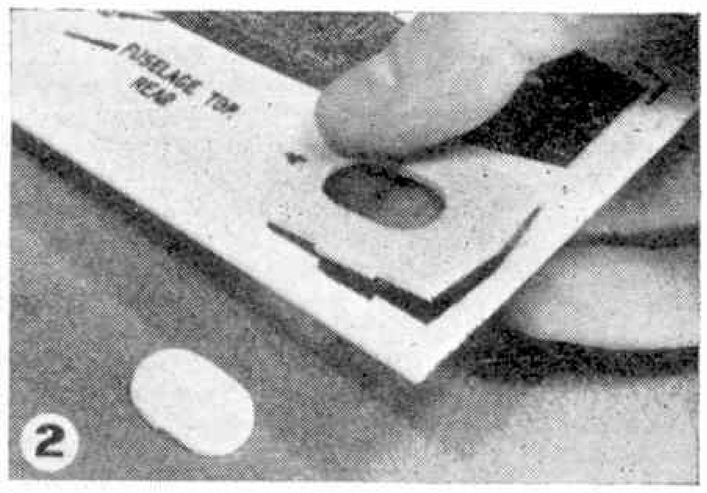
Models as attractive as the Keilkraft 'Swallow' are usually tricky to build and fly, but it's no exaggeration to say that even if this is your first model, you'll easily be able to assemble it in one evening. With just a little care and the help of the very good instruction sheet that comes in the kit, you'll find the flying's easy too!

There are 2 other models in this series—they cost 4s 11d each

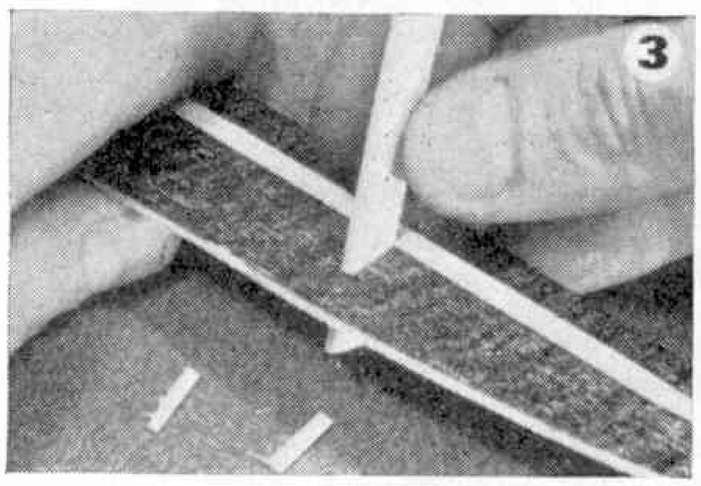
THIS SWALLOW'S REALLY EASY!

1 Here are all the pre-decorated parts just as they were removed from the die-cut sheets. The kit includes plastic propeller, wheels, nose bearing assembly, ready bent wire and rubber motor

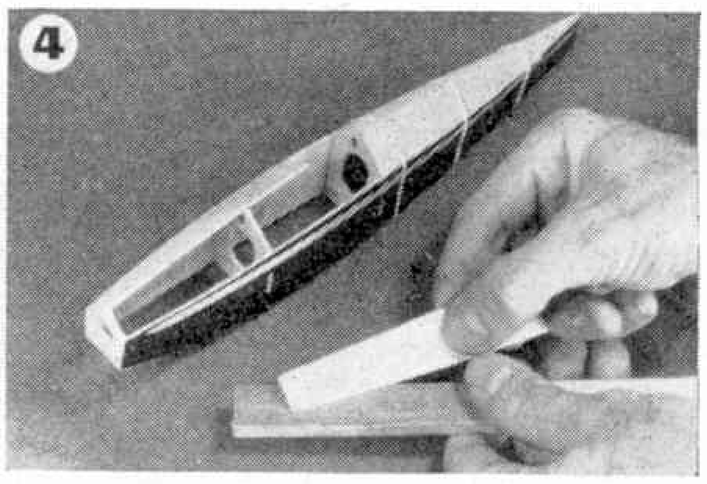
2 Most pieces almost 'fall out' of the sheet, but never try to *force* a reluctant bit—carefully run a razor blade or hobby tool through the incompletely cut slit



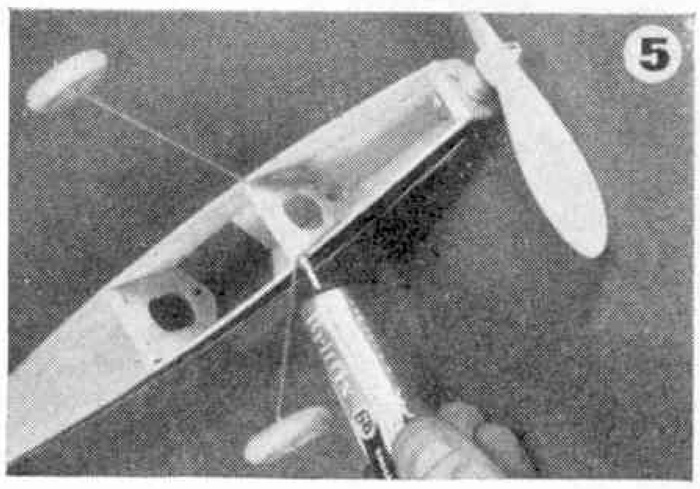
3 Slots in the fuselage sides for the bulkhead tongues, are easily punched out with a scrap piece of $\frac{1}{16}$ in. sheet balsa



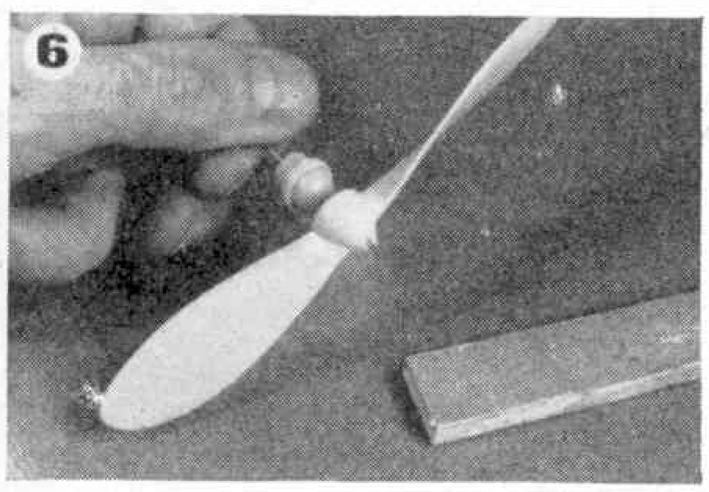
4 Stick a piece of sandpaper to a flat strip of wood and use it to chamfer the edges of the roof-like fuselage decking pieces. Hold them in place with rubber bands and pins until the cement dries.



5 When the undercarriage wire has been cemented in place, allow it to dry and then give a second coat of cement for strength. Use fine nose pliers to bend up axle and prop shaft ends



6 Balance the propeller and remove any excess plastic from the heavier blade using the sandpaper block described above



AND NOW!

THE Mini Super

48″ wingspan.
For 1.5 to 2.5 c.c. engines.
Single channel or intermediate R/C.

Radio Control Model by KEILKRAFT

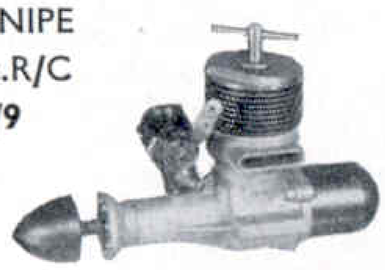
KIT CONTENTS INCLUDE

- All balsa wood parts pre-cut to shape
- Preformed undercarriage
- Pre-shaped wing leading edge
- Metal Clunk Tank
- Sponge rubber wheels
- Full size plans
- Building and flying instructions

Price £4.10.0 incl. tax

Recommended Engines

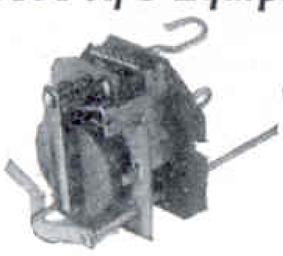
M.E. SNIPE
1.5 c.c.R/C
73/9



A.M. 15
MULTI-SPEED
75/9

Recommended R/C Equipment

Elmic
COMPACT
escapement
67/4



Elmic
CORPORAL
escapement
47/4

By using Elmic COMPACT and CORPORAL escapements with either the O.S. PIXIE or R.E.P. GEMINI single channel R/C equipment you can obtain rudder, kick-up elevator and engine controls.

R.E.P. GEMINI **£19.7.1**
Transmitter & Relay Receiver

O.S. PIXIE **£16.15.0**
Transmitter & Relay Receiver

KEILKRAFT HANDBOOK

90 pages of articles, information, kits, and hundreds of accessories.

AT YOUR MODEL SHOP NOW

Price **2/6**

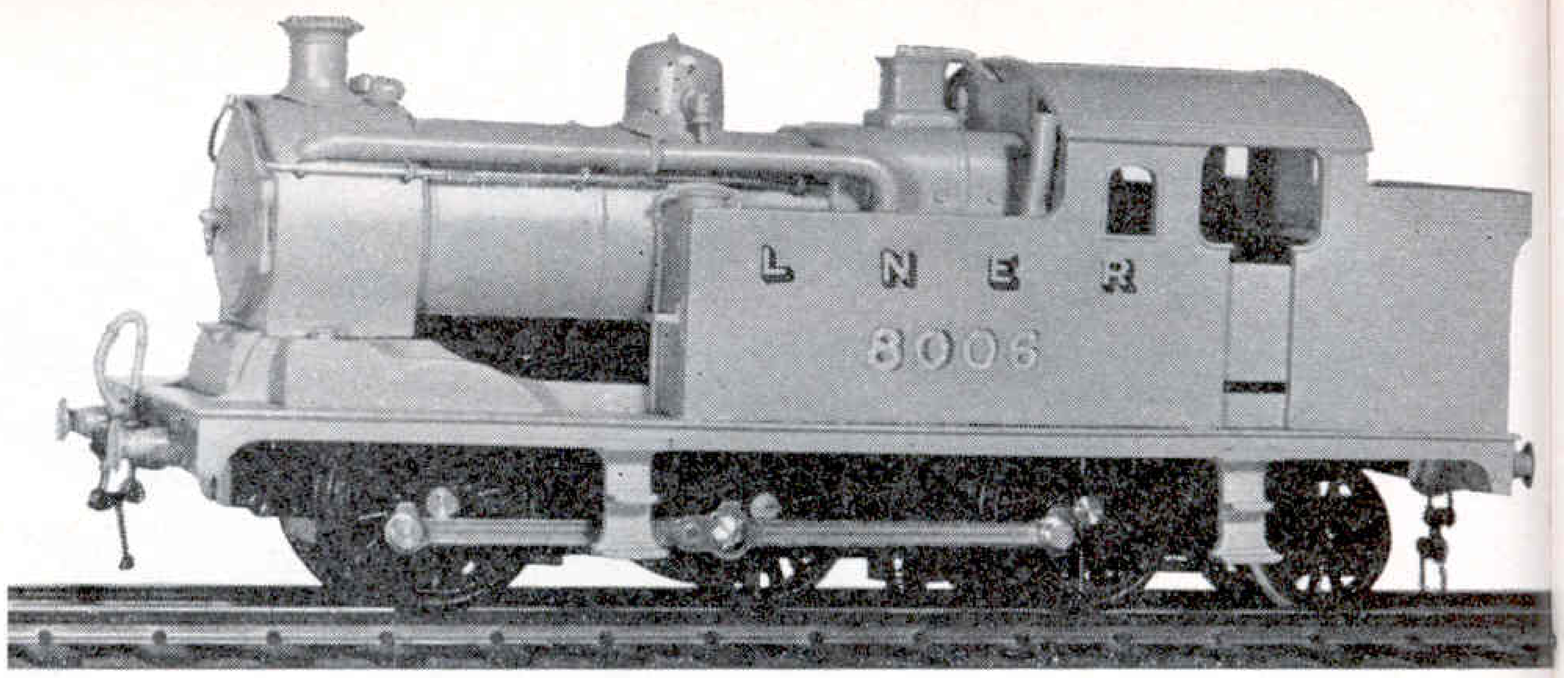
or direct from:

E. KEIL & CO. LTD.
WICKFORD, ESSEX

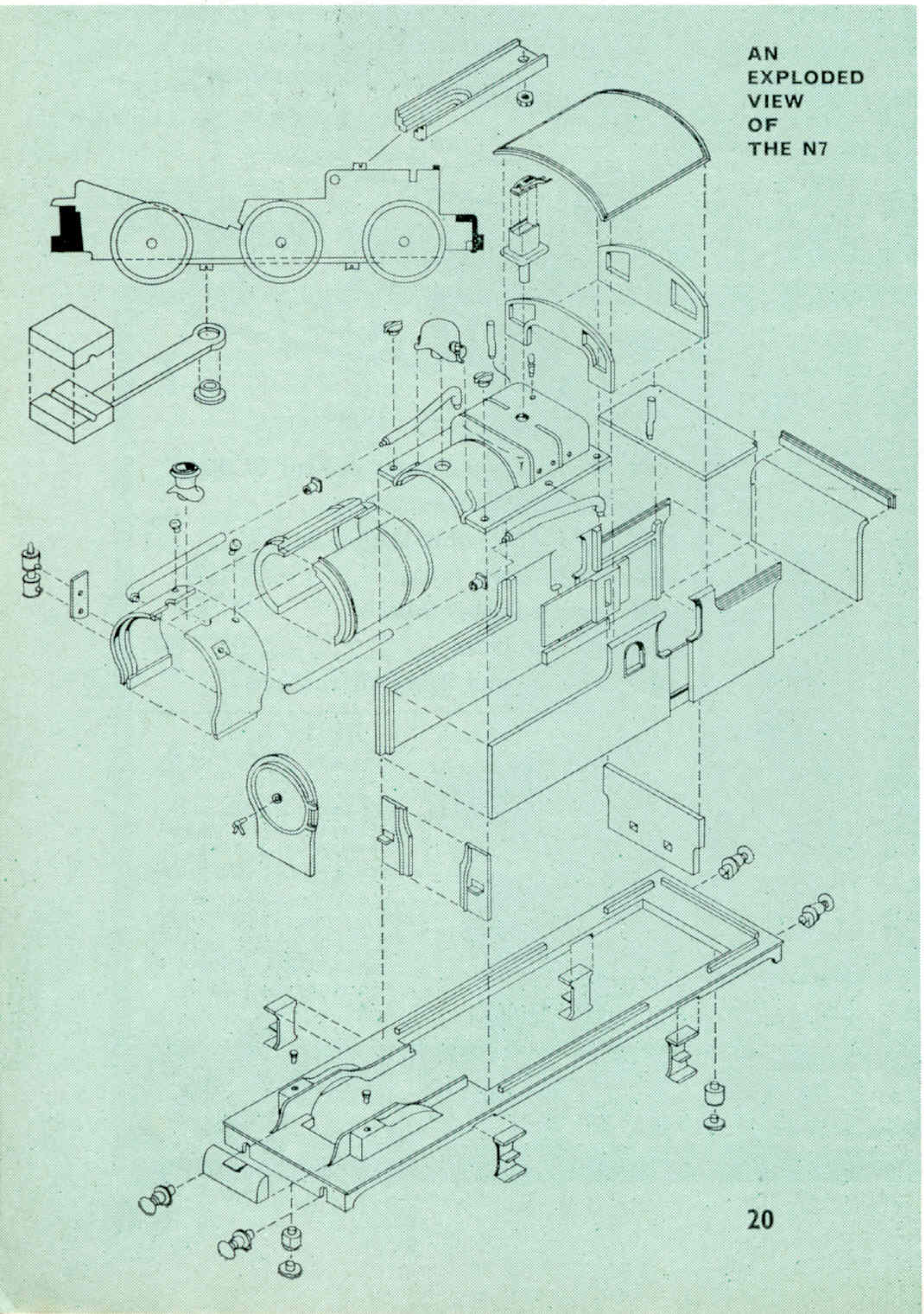
2/6 plus 9d. postage

KEILKRAFT SECOND TO NONE!

MAKE IT IN METAL



Mike Rickett takes a closer look at metal loco kits—particularly this Wills kit for an N7. It's suitable for almost any layout.



PLASTIC kits have become, in recent years a recognised means among even the most experienced of enthusiasts, of acquiring many of the essential accessories that a model railway needs. Kits are now made for nearly every conceivable item including a wide variety of locomotives, which can be most useful for building up a more individual locomotive stud than would be possible with ready-made locomotives. But this feature is about *metal* kits. Their method of assembly is basically identical to that of plastic kits except that different adhesives must be used. More than fifty models are produced for 00 gauge by three firms that specialise in metal kits—Wills, Gem and K's—and I intend this month to describe the construction of the recently introduced Wills L.N.E.R. N7 0-6-2T locomotive body kit.

Whereas a number of kits are designed to be used with separately available chassis kits, this kit is one of a large number that are intended to be used with a standard Tri-ang 0-6-0 chassis. These can usually be bought separately from a Service Agent without the corresponding bodies. Slight modification is necessary before the chassis can be used for the N7 by cutting away the shaded areas shown on the exploded drawing.

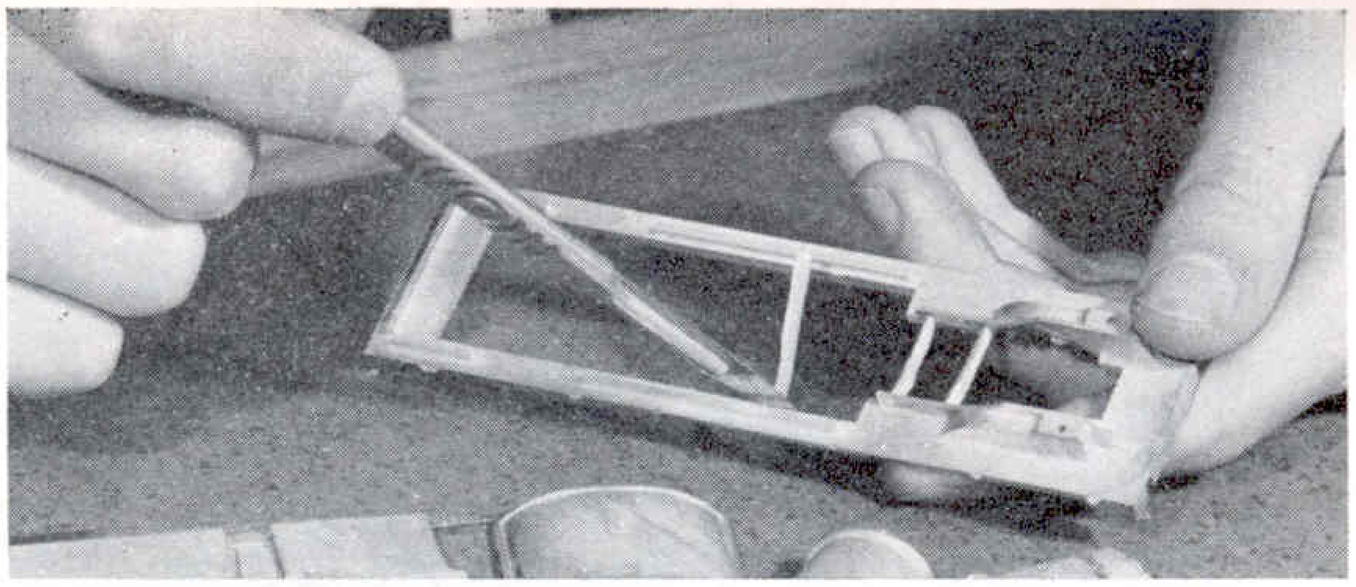
The tools required to build a white metal body kit are quite simple and have been mentioned before. The most important items are a fine needle file, either round or flat, a modelling knife, a backsaw or razor saw, fine emery paper, drills for cleaning flash from inside holes, an abrasive detergent such as Vim, and a stopper paste. For adhesive any of the contact adhesives such as Evo-stik, Bostik, or Uhu are quite suitable, although, an extra strong bond can be made with Araldite. This does, however, have the disadvantage of being expensive, and it is also very slow setting, unless the join is subjected to a certain amount of heat. Obviously, since the melting of the white metal itself is quite low, too much heat cannot be used but considerably accelerated drying times can be achieved by placing the components over a radiator or similar heat source, the positions of the parts being maintained with Sellotape.

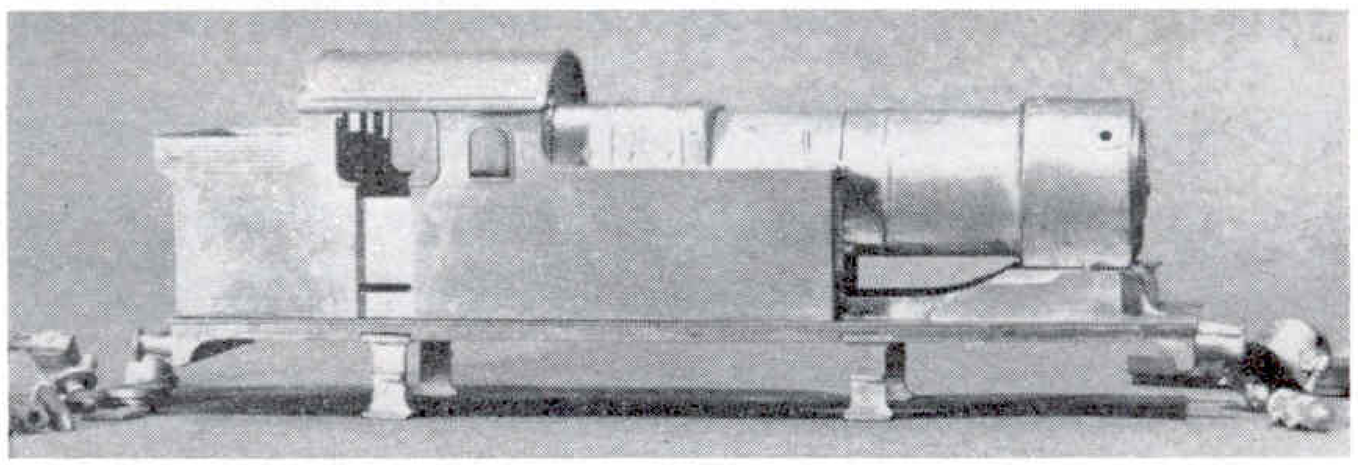
Although no special skills are required in the building of the N7 kit, care is a pre-requisite in every stage of construction. Do not rush the assembly of the kit, for time taken in the beginning will be amply repaid in the finished result.

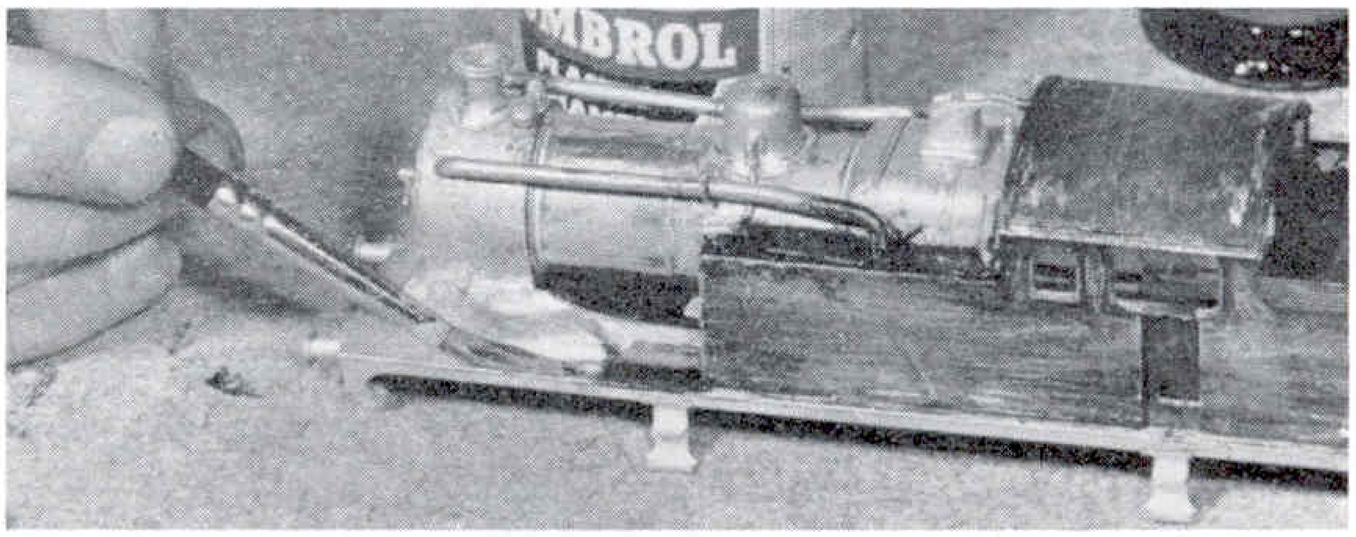
The Wills N7 kit costs £2 16s. 0d., and includes all the parts required to build a well-detailed locomotive body. Before

beginning assembly, check that no parts are missing and that no pieces are broken or malformed. It is unreasonable to expect the manufacturer to replace or repair a kit that is already half built, and it is worth checking beforehand. Parts that are slightly bent or twisted can easily be dealt with yourself, but do not try to twist the parts back to shape when cold. Immerse them in water as hot as your hands can stand, and then gently persuade them to the correct shape. Once all parts have been checked with the list at the bottom of the instruction leaflet, the cleaning of flash from castings can proceed. Although Wills kits are remarkably free from flash, small pieces of surplus metal are present on many parts, which if left, would mar the appearance of the finished model, and would also make the job of assembly rather more difficult.

The more important parts of the kit that are to be used in the first stages of assembly should be dealt with first. These include the footplate, two cab sides, cab roof, firebox top and the two Tri-ang chassis boiler halves. The flash round the edges of the cab roof should be filed off and any raised portions of metal on the roof surface filed down to make the surface smooth. The beading, or raised piece of metal running round the roof surface can be improved by lightly running the file along both sides of the beading to make it more prominent. Detail of this sort often tends to become slightly obscured when the model is painted, and extra care in making it a little more noticeable is well worth while.







Top picture shows flash being cut away from the footplate. Centre: the complete superstructure with the boiler fittings and other small parts ready for assembly. Above: Primer paint being applied to the completed locomotive body before painting with Humbrol Railway Colours

Flash

The two cab sides can be dealt with in a similar manner, and the flash on the bottom edges of the sides can be pared down with the modelling knife, and then filed. The appearance of the coal rails at the top of the bunker will be improved by carefully deepening the grooves with the knife. Detail such as beading round the cab windows and doors should once again be rubbed gently with the needle file, and the corners of the slit at the bottom of the cab doors filed square. Also clean the tank and bunker ends at each side of the door with the file. Turn both tank sides over to ensure that no projections exist on locating strips of metal running along three sides.

Substantial amounts of flash will be found at both ends of the firebox top, and it will be necessary for this to be cut and filed away at the boiler end of the casting. Both the inside and outside of the boiler must be completely flush, to allow the two boiler halves to be inserted, and for their corresponding upper surfaces to be smooth. The boiler bands on the firebox should be treated in the same way as the beading, especially the one immediately in front of the firebox which is a little indistinct. Blocked holes in the tank tops might also require drilling or gouging out with the end of a needle file.

Flash in the ends of the two boiler halves must be removed with a knife and file, and any projecting pieces of metal on the two boiler bands very carefully filed away. The three pieces of surplus metal between the two sides of the footplate must be removed with a knife, and the pieces of flash on one footplate edge carefully filed down. Some flash will also be found on the inside faces of the splashers.

The first step in the assembly of the model is to glue the two tank and cab sides to the footplate making sure that the bottom edges of the sides lie flush with the footplate. The mechanism mounting bracket can also be inserted at the same time. When using a contact adhesive, remember to spread the glue onto both surfaces, and then after a period of time—usually about 15 min., press the parts together. When the glue has set, the bunker back and coal plate, which may need cleaning with a file, can also be added. When fitting the bunker back be sure that no large gaps are left between it and the bunker sides, by pressing the two sides inwards. The bunker coal plate is fitted behind the cab onto the two strips of metal on the bunker sides. The other important parts, once all extraneous material has been disposed of, can be glued into their respective positions in this order—rear spectacle plate, firebox top, front spectacle plate, and cab roof.

While this assembly is drying, a number of other operations can be attended to, including the assembly of the safety valve lever unit to the safety valve base and the two pipe units to pipe unions. These small parts must be cleaned beforehand with the file—especially the raised lines of flash to be found on many castings. You might also find that the pipe unions will need the hole that runs through them widening to allow the pipe to be connected. These assemblies may also be set aside to dry, and the two tank fronts cleaned and glued into position.

The next step is to glue one of the two sets of boiler pieces together—one for the Tri-ang chassis, and one for a scale chassis. The smoke box castings, including the smokebox door, when glued together, is fitted before the boiler pieces, and I found that it was better to assemble the two boiler halves and the smokebox separately, and then to glue the two pieces onto the loco.

Finishing

It is probably easier to fill all cracks in the locomotive at this stage than to wait until it is complete. For this a stopper such as Belco Cellulose Putty is ideal, and should be placed in cracks with a pin, afterwards smoothed over, and when dry, filed flush. An epoxy stopper such as Plastic Padding or Bondafiller is also highly recommended.

Other parts can now be added in any order, and a 57 drill used for holes in the boiler for handrails. Once all parts have been added, and excess glue cleaned off with a file or pin, the complete locomotive can be given a scrub up with a stiff solution of Vim rubbed on with an old toothbrush. This removes the inevitable finger-deposited grease which will prevent good paint adhesion.

When the locomotive is dry, the first coat of paint is applied. This is only intended to act as a primer, and you may

Continued on page 47

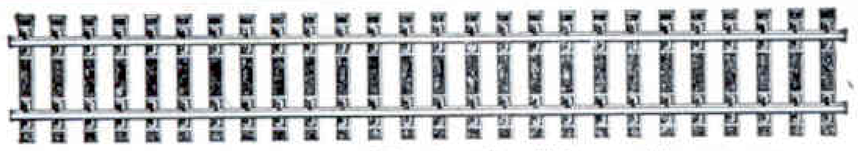
it's a fact!

FORMOWAY

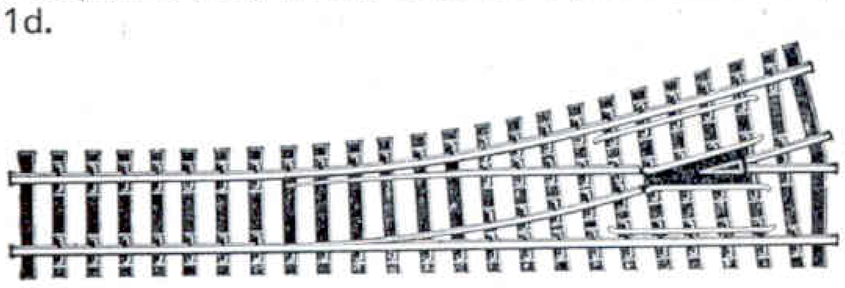
make the largest range of OO scale pointwork in the world and each one is ready wired

FORMOWAY track and points are the real thing in miniature, with sprung blades as in the prototype. All sleepers are correct to B.R.M.S.B. measurements. Rail sections are in hard drawn nickel silver and all electrical connections are welded in.

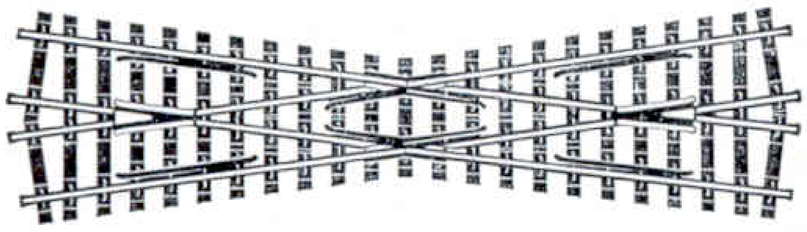
just look at this superb range!



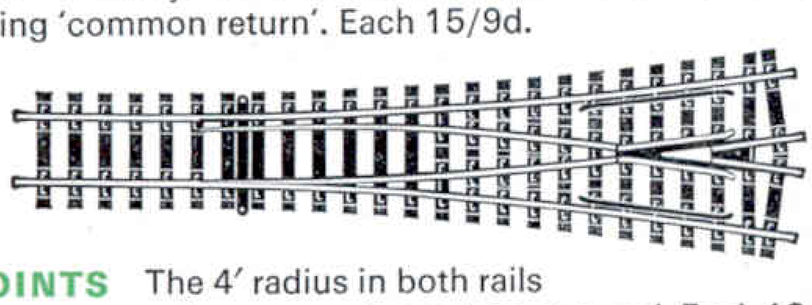
FORMOWAY TRACK Truly flexible without stress or distortion. Can be laid without cutting or preparation. Rails and sleepers exactly match Formoway pointwork. Per yard 5/11d.



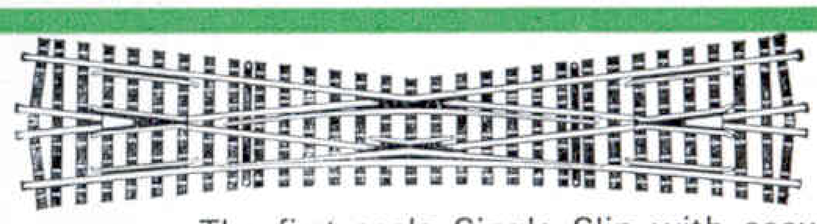
TURNOUTS L.H. and R.H. in 2′ and 3′ radii. Two L.H. points for a 'Trailing' crossover, two R.H. points for a 'Facing' crossover maintaining strict 6′ way between tracks. 2′ radius 8/6d. 3′ radius 10/6d.



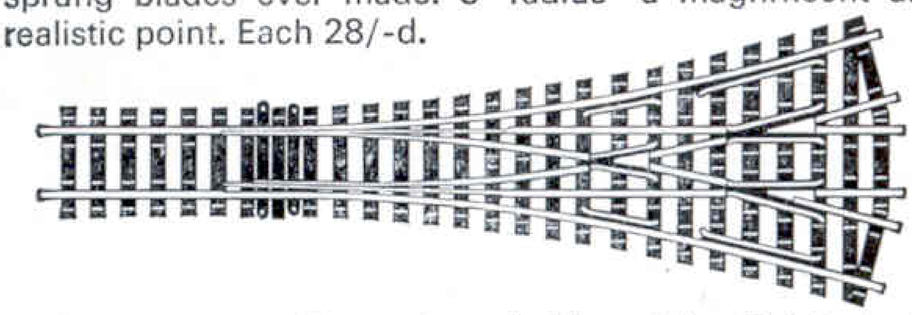
DIAMOND POINTS This 15° crossing makes up into a superb double junction suitable for all two rail systems including 'common return'. Each 15/9d.



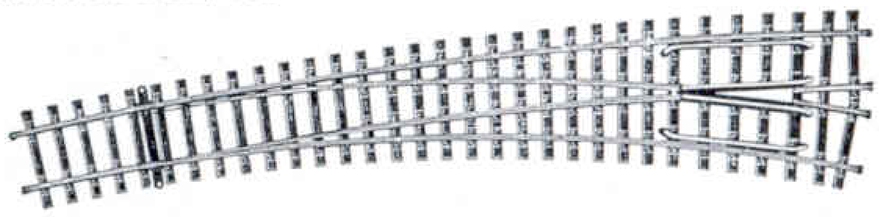
Y POINTS The 4′ radius in both rails ensures a smooth pass over the points at speed. Each 12/9d.



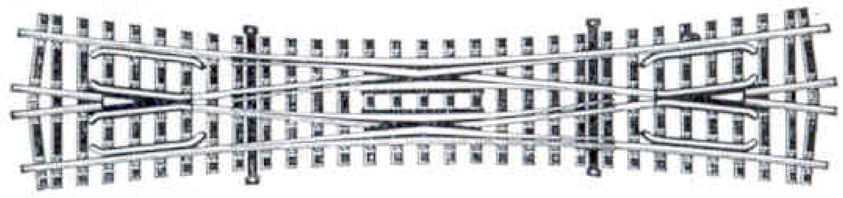
SINGLE SLIP The first scale Single Slip with accurate sprung blades ever made. 3′ radius—a magnificent and realistic point. Each 28/-d.



3 WAY POINT The only scale Three Way Points in the world. A most ingenious and fascinating space saver. 2′ radius. Each 32/1d.



POINT ON THE CURVE Allows maximum amount of straight track for platforms by making full use of space normally lost on curves. 2′/4′ radius. L.H. & R.H. Each 14/-d.



DOUBLE SLIP FIRST AGAIN ! The only 3′ radius Double Slip ever produced in quantity—add true 'railway practice' to your layout with this complicated but realistic point. Each 35/-d.

and more special FORMOWAY points are on the way!

Write now for your copy of the Formoway scale model Handbook 1/6d. each plus 6d. postage

for the finest track in the world choose

FORMOWAY

COMPLETE SCALE TRACK SYSTEM

GRAHAM FARISH LTD · ROMANY WORKS · WAREHAM ROAD · HOLTON HEATH · POOLE · DORSET

FOUR BY TWO

Mike Rickett takes a closer look at the possibilities of N Gauge

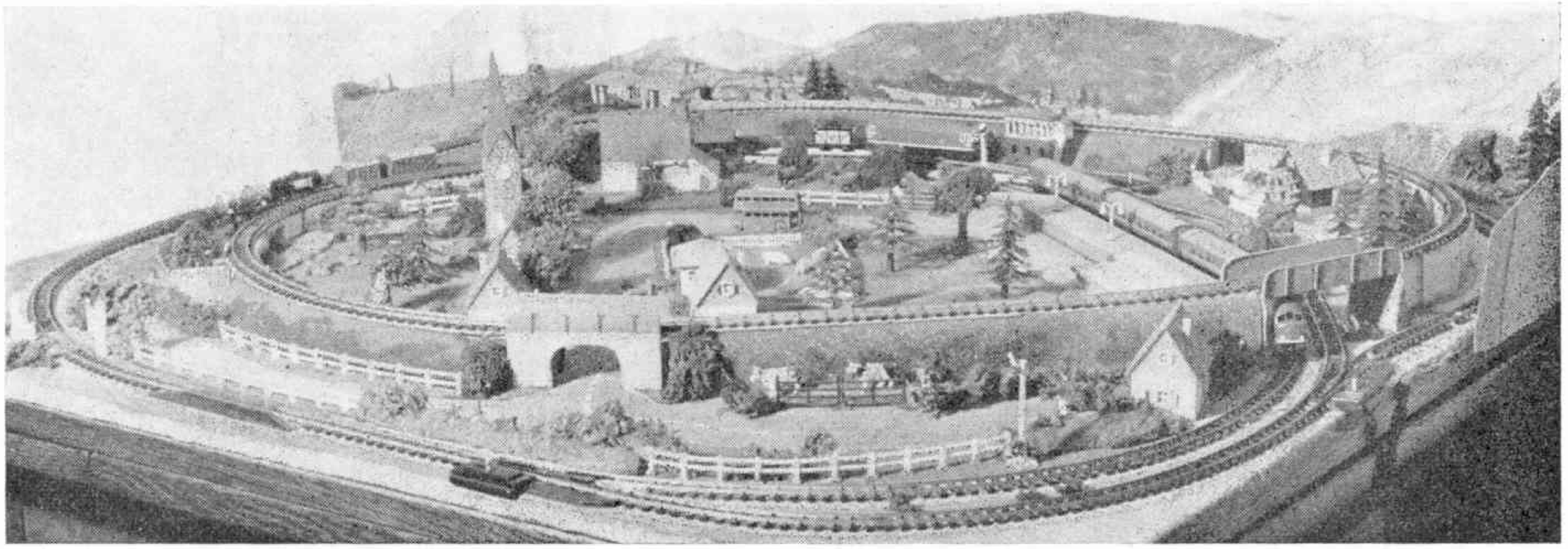
IN the days when large houses and plenty of space was the rule rather than the exception, quite large areas could be devoted to the model railway. Those days have unfortunately passed for most of us, and the model railway enthusiast now often finds himself with a very small area in which to build his layout.

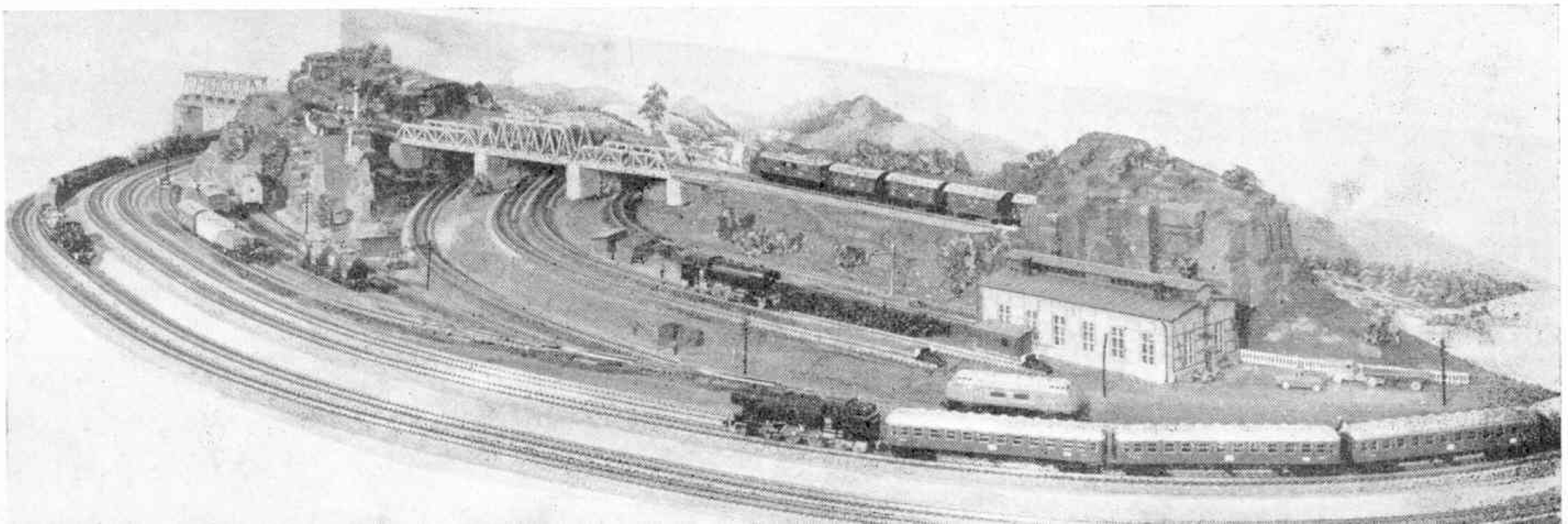
0 gauge, which was in almost universal use before the war, gave way to the more compact 00 gauge, allowing a more comprehensive layout to be built in a given area, yet with a scale still large enough for all detail to be included. Even this scale has its limitations, however, especially where very small areas are concerned, and it was found, for example, that in an area of 4 ft. by 2 ft. it was only possible to include an oval of track with one or two sidings. Although formations of this sort are quite interesting when first built, they soon become boring, and for this reason it is better to follow a more complicated plan whenever possible. The need was obviously felt for something even smaller than 00, and eventually a way was discovered to build electric motors small enough for locomotives only half the size of their 00 equivalents. This gradually led to the development of a new scale, at first known as 000, but which has subsequently become known as N gauge.

This new scale, although half the size of 00, uses a gauge of 9 mm., which is actually more accurately proportioned than 00, which uses 16·5 mm. N gauge, once only used by specialists, has grown considerably since its early beginnings, and the scale makes possible the construction of layouts that could not normally be built in 00 gauge, because of the area they would occupy. The chief advantage of N gauge, however, is that it makes possible the building of a comprehensive layout in a tiny area measuring only 4 ft. by 2 ft!

The range of commercial equipment for N gauge even at this early stage of development is quite comprehensive. The standard of design and performance is also exceedingly good, and further additions by the four manufacturers concerned with the scale—Arnold Rapido, Lone Star, Minitrix and Piko—are made at regular intervals. Already they produce between them twenty-one different locomotives, and an even greater number of coaches and wagons. Steam locomotives, although of Continental or American types, are well represented by all four manufacturers, and available in Arnold Rapido are two 0-6-0T and a 2-6-4T, in Minitrix an 0-6-0T, in Lone Star a Baldwin 0-8-0 and in Piko an 0-6-0T, 2-10-2T and 2-10-0.

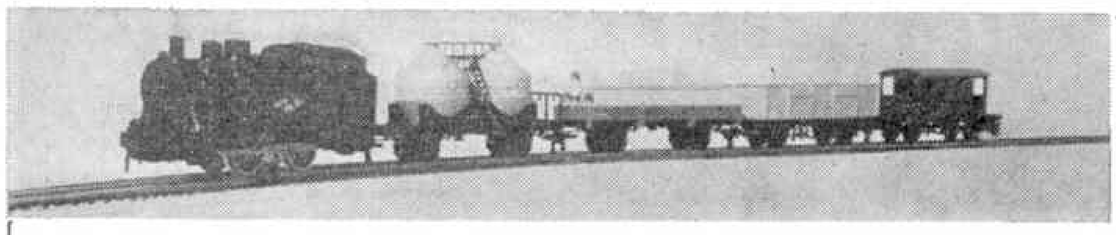
Diesel and electric locomotives are not ignored and available in Arnold Rapido is a Bo-Bo blue electric, which, incidentally, closely resembles the B.R. blue electric, and which is available in three liveries. This is a very powerful locomotive capable of handling fourteen coaches. There's also the American Bo-Bo diesel and a Swiss steeple cab





Above: a 'card-table-top' layout in N (or 000) gauge using Lone Star equipment. Below: a section of a comprehensive layout built with PECO Flexible Track and a variety of locomotives and rolling stock

GREAT SETS!
from PLAYCRAFT RAILWAYS



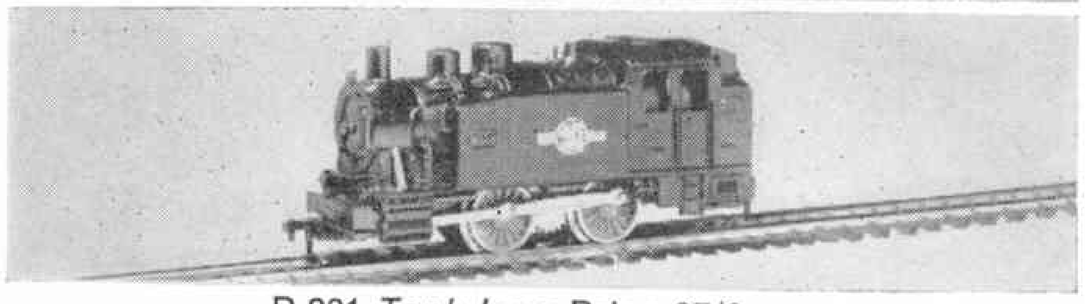
P.1320 "SNOW HILL" GOODS TRAIN SET—65/-

One of the most realistic electric train sets on the market, consisting of Electric Tank Locomotive, Open Goods Wagon, Drop-side Wagon with tubes, Bulk Cement Wagon, Brake Van, Power Connector, two containers, and 8 Curved Rails and 2 Straight Rails, altogether requiring a space of 27″ x 33½″.

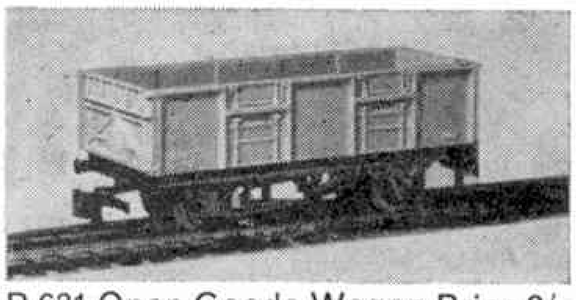
P.1460 "LONDON/PARIS NIGHT FERRY PASSENGER TRAIN SET—115/-

Here's a set no true electric train enthusiast should miss. It's magnificent! You get a Pacific Locomotive and Tender; 3 Channel Ferry Sleeping Cars; 8 Curved Rails; 4 Straight Rails (Track oval requires space of 27″ x 33½″) and a Power Connector. Don't wait! *Now's* the time to get this fabulous set!

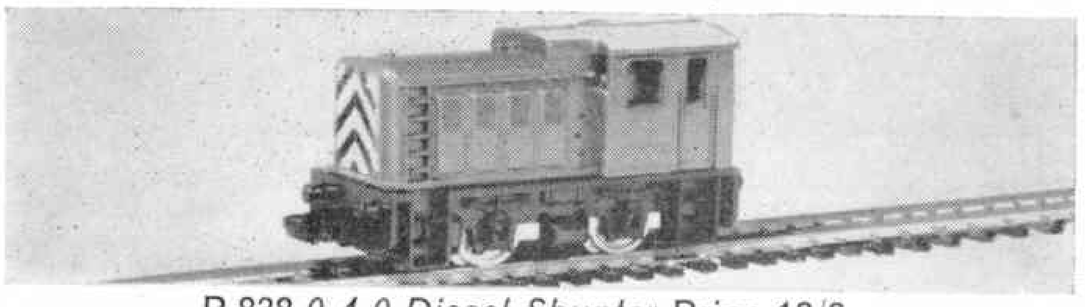
Every model railway enthusiast knows about Playcraft Railways. Knows about their fabulous realism, their watch-like precision, their wonderfully low prices! And Playcraft give you in all *14 sets* to choose from! All sets, accessories, rolling stock and rail still cost less than any other make! Build that big layout for a small outlay!



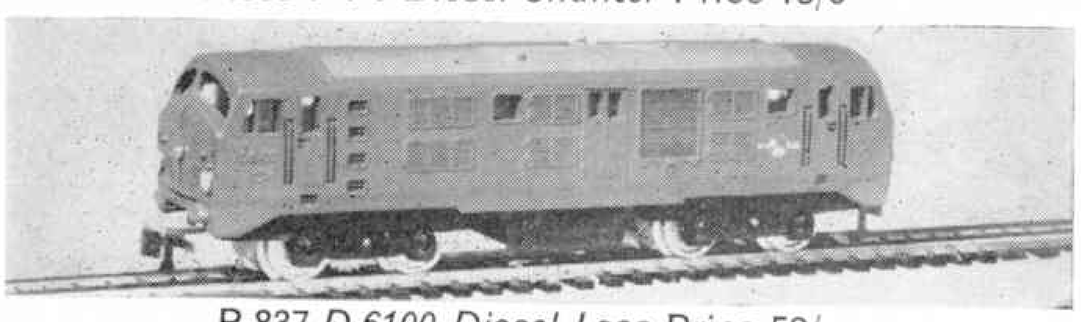
P.831 *Tank Loco* Price 37/6



P.631 Open Goods Wagon Price 3/-



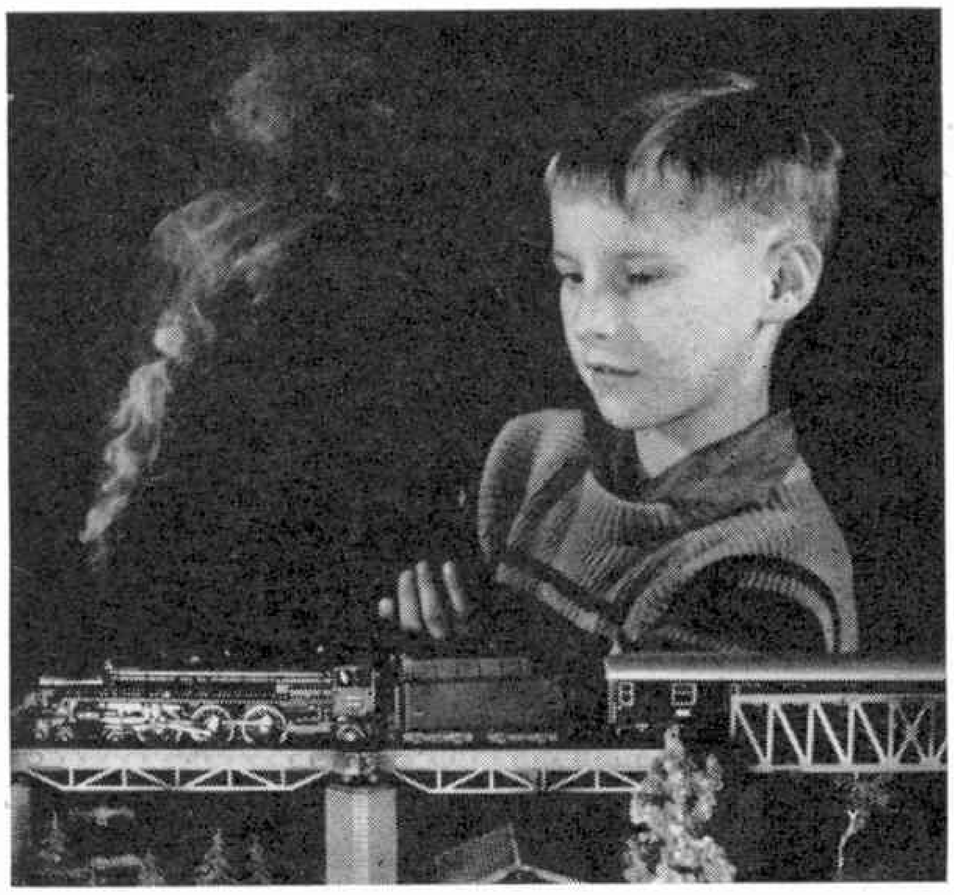
P.838 *0-4-0 Diesel Shunter* Price 18/6



P.837 *D.6100 Diesel Loco* Price 52/-

OO/HO GAUGE **Playcraft RAILWAYS**

AVAILABLE AT ALL GOOD TOYSHOPS, STORES AND F. W. WOOLWORTH LTD.



You're on the right lines with

MÄRKLIN

the finest H.O. railways available

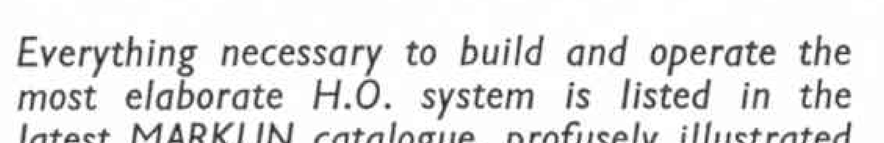
Everything necessary to build and operate the most elaborate H.O. system is listed in the latest MARKLIN catalogue, profusely illustrated in black and white and full colour.

NEW additions this year are authentic and fully detailed locos and rolling stock based on working models from Germany, France, Italy, Austria and Switzerland.

Accessories include remote controlled uncoupling system, level crossings with automatic barriers, scale model bridge construction kits and a host of others to make your layout complete in every detail.

Write today for your 1965 MARKLIN catalogue, price 2/6 post free.

Sole U.K. distributors:



RICHARD KOHNSTAM LIMITED
13–15a High Street,
Hemel Hempstead, Herts.

PECO makes it Nice 'n easy!

Now your Arnold locos can have the BR look—with

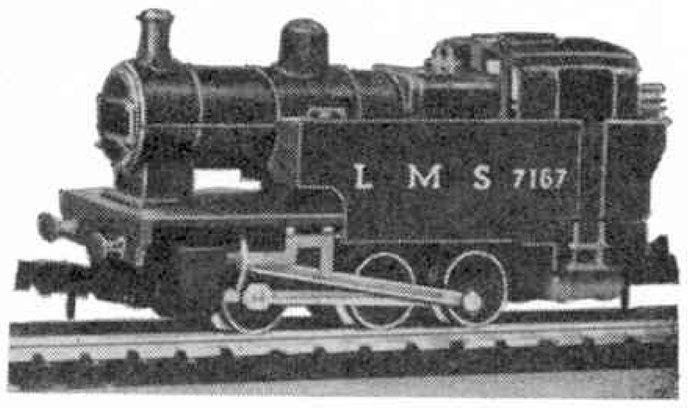
PECO Loco body kits

FAIRBURN TANK kit. 14 parts in white metal for assembly by gluing into a most attractive N gauge model. For use with Arnold 2-6-4. Supplied with fully illustrated instructions.

Ref. No. NL-1 Fairburn 2-6-4 tank. Price 24/6 inc. P.T.

DOCK TANK kit. Designed for easy assembly by gluing. 15 parts to make up into a pleasing miniature of a well-known prototype. For use with Arnold 0-6-0. Illustrated construction details.

Ref. No. NL-2 Dock 0-6-0 tank. Price 22/6 inc. P.T.



Run them super-smoothly—on

PECO STREAMLINE N gauge TRACKAGE SYSTEM

Get these catalogues NOW!

New Arnold catalogue. A profusely illustrated, complete listing of the very comprehensive 1965/66 Arnold range of N gauge Steam, Diesel and Electric Locos, Coaches, Wagons and Accessories.

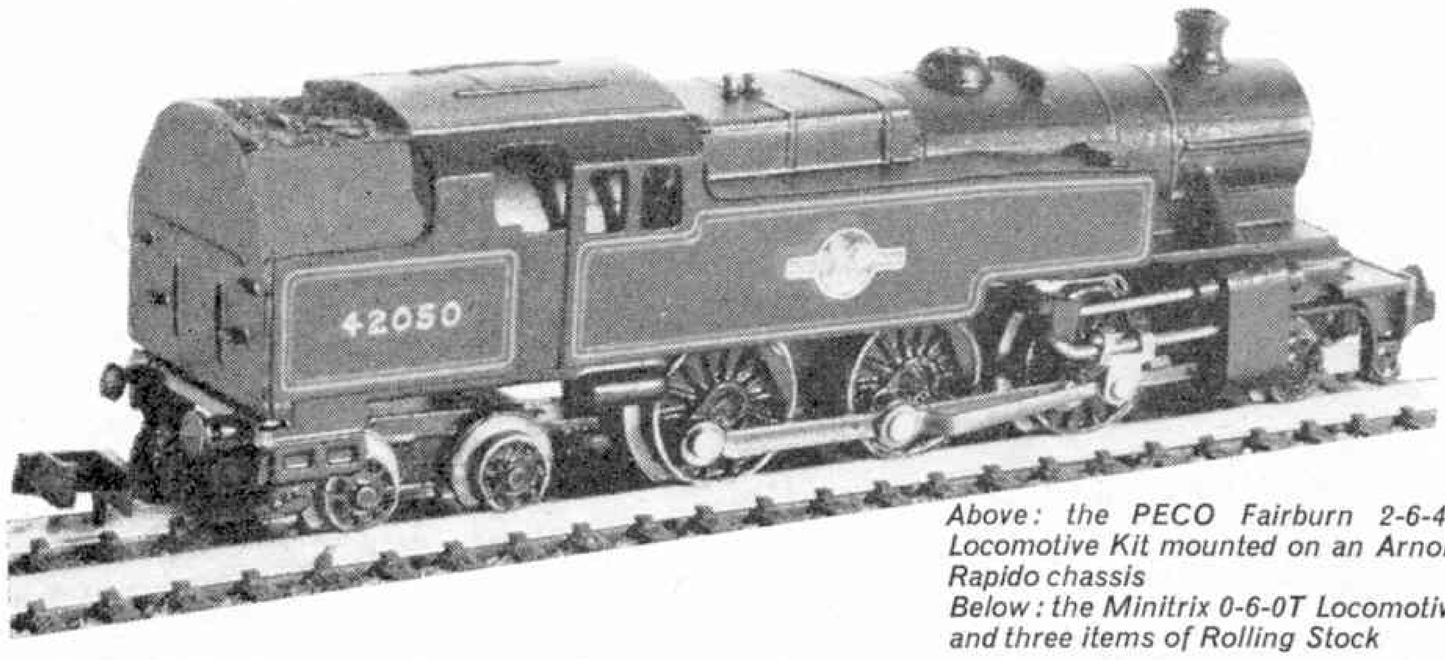
1/9 *from Model Shops or* 2/3 *by post direct.*

Peco Catalogue. A veritable mine of information packed with helpful information for all railway model enthusiasts. Full details of the complete range of Peco products. Copiously illustrated.

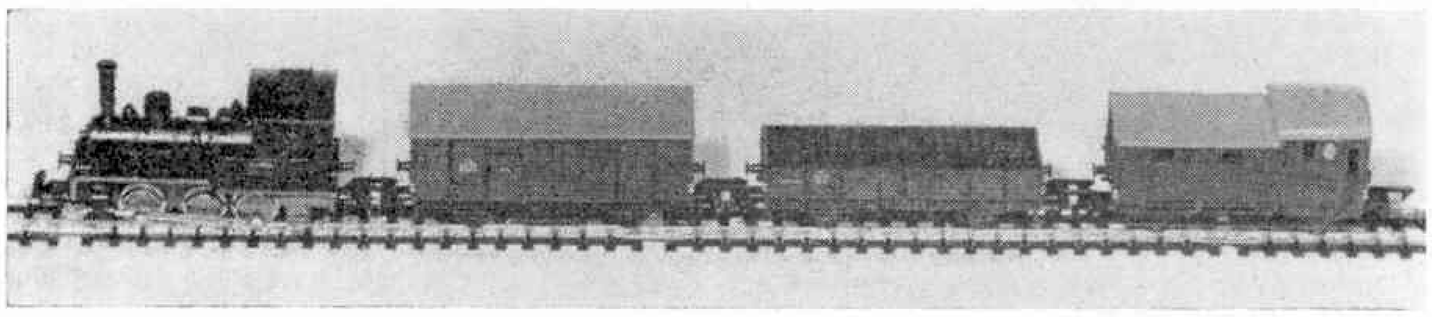
1/9 *from Model Shops or* 2/3 *by post direct.*

PRITCHARD PATENT PRODUCT CO LTD · SEATON · DEVON

engine. Lone Star produce six F7 diesel engines, each in the liveries of a different railway—New Haven, Canadian National, Canadian Pacific, Kansas City Southern and Chesapeake & Ohio. They also produce a British Railways type 2 Bo-Bo locomotive. A recent import of considerable interest is the Piko Hungarian C-C diesel loco. Rolling stock of all makes with the exception of the coaches produced by Lone Star, is basically Continental or American in design, and a vast variety, far too great to describe here, is available for the enthusiast to choose from.



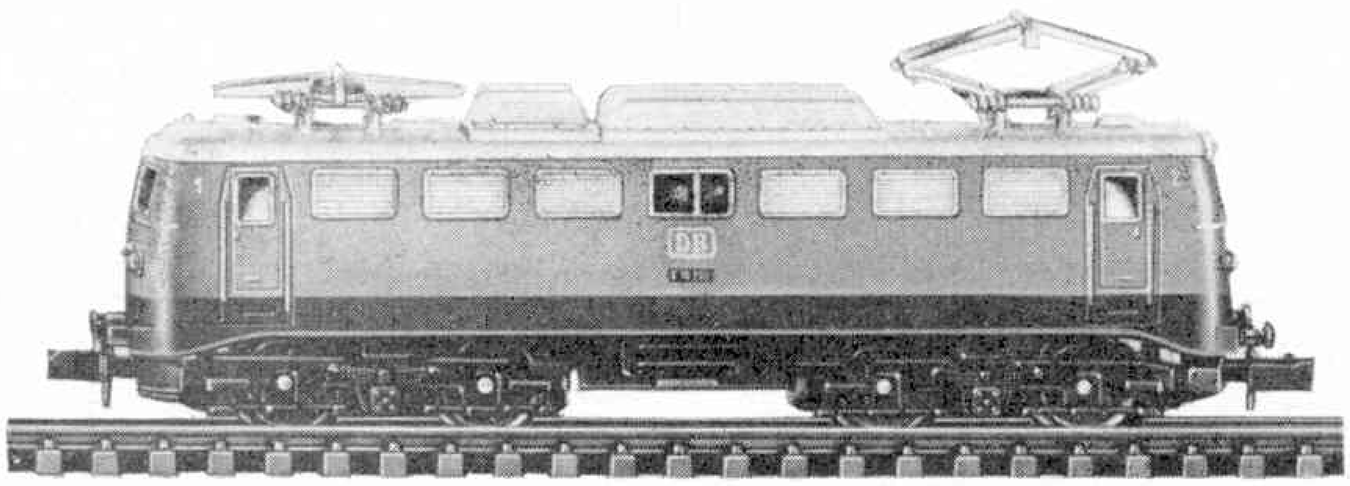
Above: the PECO Fairburn 2-6-4T Locomotive Kit mounted on an Arnold Rapido chassis
Below: the Minitrix 0-6-0T Locomotive and three items of Rolling Stock



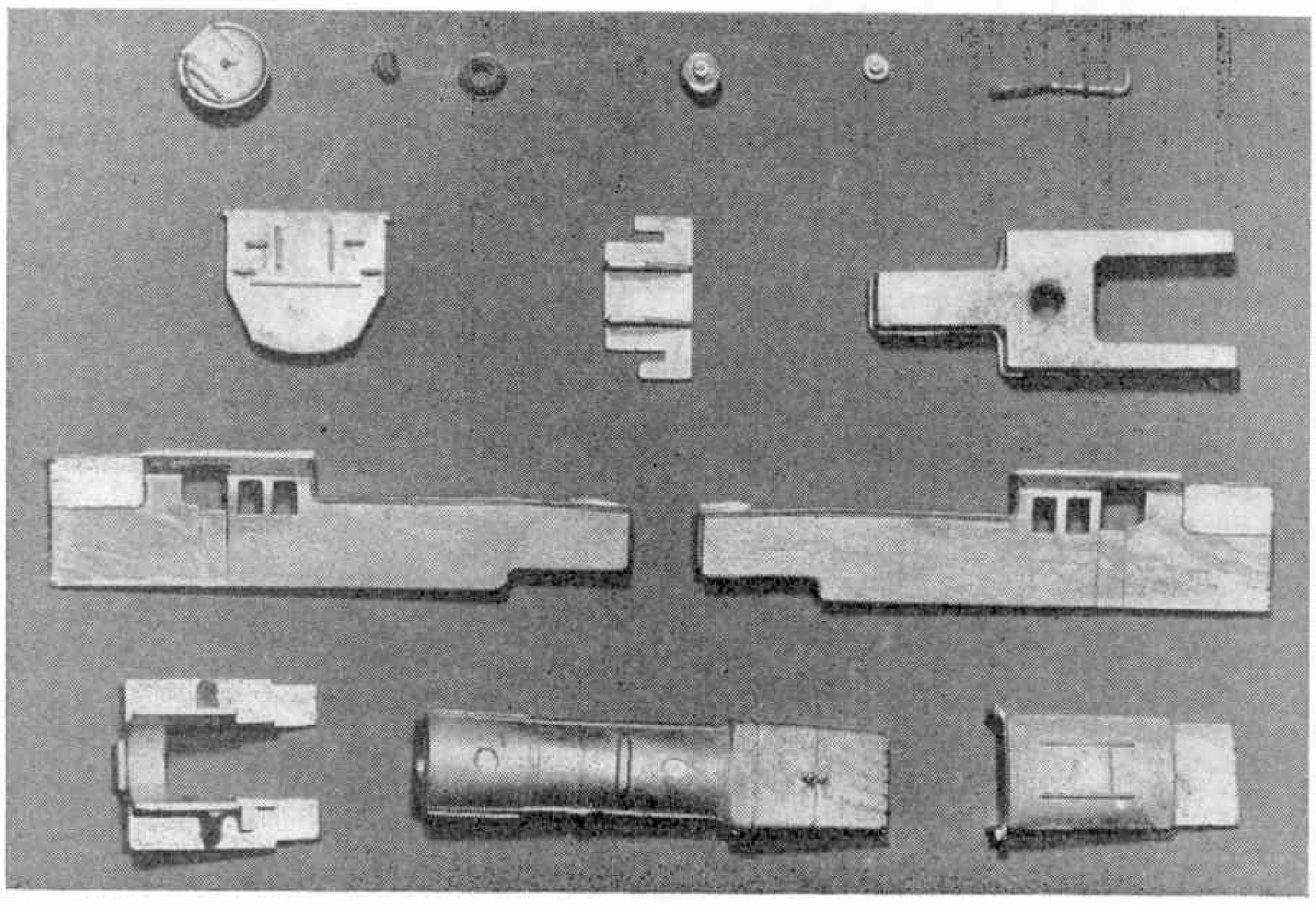
Creating a scene

One of the unique characteristics of N gauge, is its ability to create an overall scene or impression, rather than a collection of highly detailed individual models. The commercially produced items are admittedly made to a very high standard of detail, but this is not sufficient to detract from the layout as a whole, which in N gauge, is the important thing. All models on the layout should, therefore, be added or built with that object in mind, and it is not really essential for any models that you may make yourself to be built to the last rivet. Quite apart from the difficulty of doing this, such detail will not be noticed anyway.

Nearly everything that is required to build an N gauge model railway is available commercially, and you can if you wish build a layout with one of the four sectional track systems. An attractive alternative is to use the track from one of these systems in conjunction with the flexible track that has recently become available for N gauge. This system, made by Peco, is a plastic base track ready-flexible to remarkably small radii—as little as 6 in.—and which can be connected to Arnold Rapido, Lone Star, and Minitrix. This obviously gives anyone willing to do the work of laying the track a great advantage, for more complex designs of the type illustrated here become possible, and it does in addition allow the lengths of sidings to be varied and realistic stations to be built on gentle curves to suit the size of the baseboard. Since most N gauge layouts have baseboards of small width, the idea of using one of the commercial sectional curved rails for the curves at the ends of baseboards and where the radius is important, is a sound one.



Above: the Arnold Rapido Bo Bo Electric Locomotive (PECO photograph)
Below: component parts of the PECO 2-6-4 Kit



Peco also intend adding a range of points to their flexible track system in the very near future, but until these come along you will find that it is necessary to use one of the other proprietary points. The plan illustrated here is designed for Peco flexible track and cannot, as it stands, be built entirely with a sectional track. The design was also intended for Arnold Rapido points although the other points available can be used in slightly altered positions — necessary because of their different radii. The Arnold Rapido, Lone Star, and Minitrix track and points, as I have mentioned before, can be fitted to Streamline track with the special N gauge fishplates available from Peco, although the rail sections are very slightly higher, but this is not sufficient to affect the performance of locomotives or rolling stock.

If commercial points and curves are used for the entire layout, I would advise the use of one system only, for a mixture of points can cause poor running, and would in any case detract from the overall appearance. The radius of the points in each system does, of course, differ slightly, and you must decide which radius would be most suitable for your purposes. Generally speaking, the larger radius will give better appearance and smoother running, although the smaller radius points do have the advantage of saving space.

Unfortunately no one common coupling is in use between the four systems, although Minitrix and Lone Star can be coupled to Arnold Rapido. It is possible to standardise on one coupling, but this involves the work of conversion, which can be considerable. The Arnold Rapido coupler would appear to be a reasonably simple and efficient coupler, and I would think that this would be an admirable standard to adopt if you dislike mixing your couplings.

Flexible track, irrespective of its size, is very easy to lay, and should be treated in the manner described in last month's

issue. The ballasting of track can give smooth running and an improved appearance, and although not absolutely essential, is desirable, especially since it is quite easily and cleanly done with the Peco foam plastic ballast strips, which are identical, except in size, to the ballast made for their 00 Streamline track. This strip is not intended for Arnold Rapido or Minitrix points or track, but it can be adapted by stretching until the sleepers coincide with the indentations.

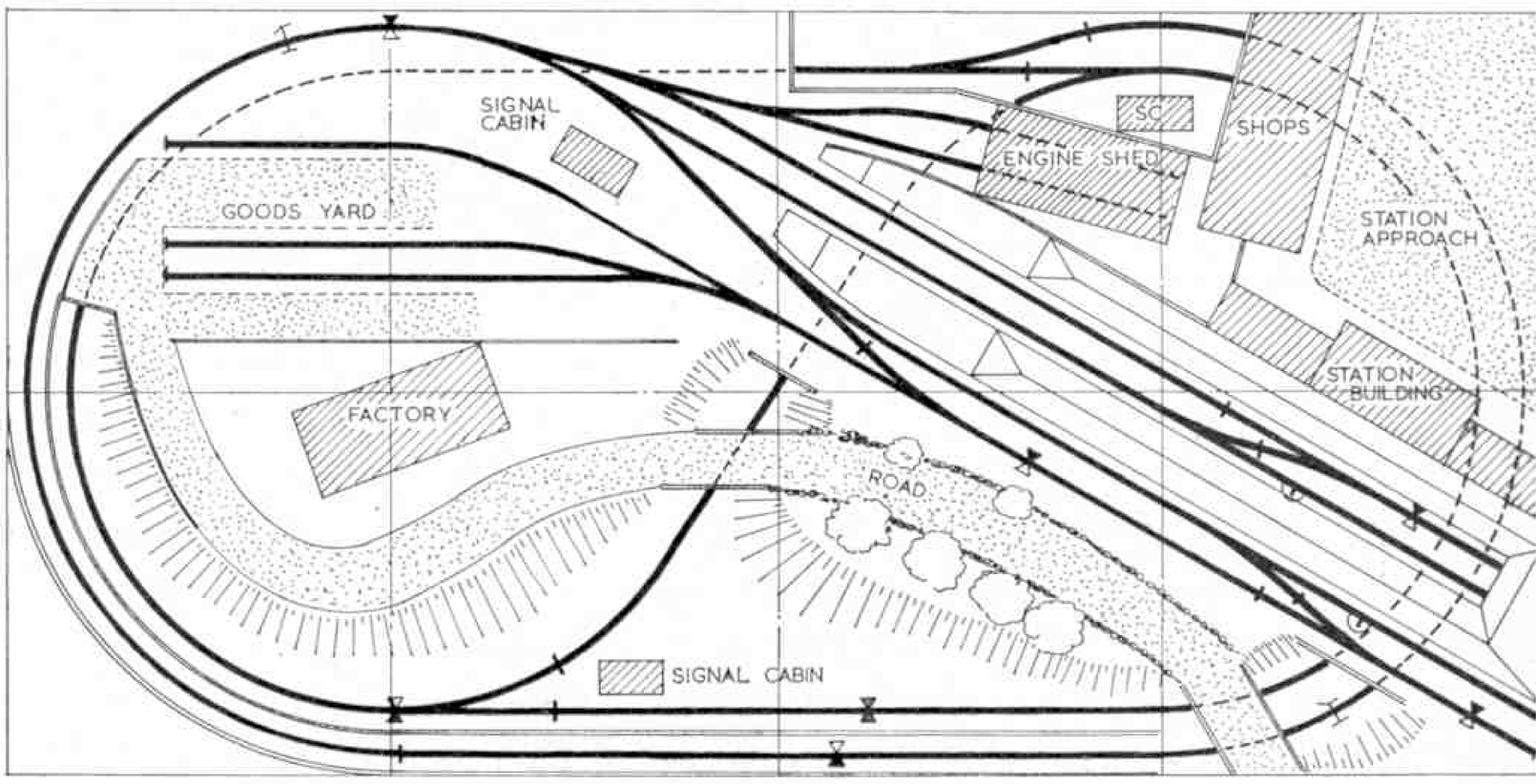
Arnold Rapido locomotives provide an interesting and entertaining way of adding to a locomotive stud. They can be used in conjunction with the recently introduced body kits, which are designed to be fitted over the Arnold Rapido 2-6-4T and 0-6-0 chassis. Already two kits have appeared, both made from white metal and of English types. These are assembled in a very similar manner to the 00 kit described in greater detail elsewhere in this issue. The first locomotive is a B.R. Fairburn 2-6-4T locomotive, and the second and more recent one, an L.M.S. 0-6-0 dock tank.

Buildings and lineside equipment are also produced for N gauge by Arnold Rapido and Lone Star. All the more essential items such as stations, other railway buildings, private houses and shops are made, and are ideal for using with buildings made from scratch yourself. Faller also produce plastic building kits. Remember, it is not as difficult to build items of this sort for N gauge as it is for 00, because of the detail that can quite safely be omitted. Generally speaking, plastic sheet or cardboard $\frac{1}{82}$ in. to $\frac{1}{64}$ in. thick is quite suitable for buildings and other small structures. With N gauge, the most important thing is to blend in buildings and track with the surrounding scenery to make the *overall* scene more convincing. With the layout plan illustrated, this problem is partly solved by the high level terminus, which acts as a scenic break besides providing a variety of interesting operations. With an arrangement of this kind, no excuse is needed for hills or cuttings, which can often serve to disguise the ends of the layout where the sharpest curves will be situated.

The layout plan

The plan this month shows a design for a 4 ft. by 2 ft. baseboard, one that most enthusiasts will be able to accommodate, however short of space they may be. The 00 equivalent of this area would be 8 ft. by 4 ft., which although a popular size is not really portable in the true sense of the word, since it does not readily lend itself to storage, nor can it be manhandled by one person. The 4 ft. by 2 ft. baseboard is a most convenient size that is easy to store in a variety of places, including the recess beside the fireplace. The plan itself shows a conventional out-and-back design giving, in addition, a continuous run and a reverse loop partly situated beneath the high level terminus station. The terminus itself is a simple scheme providing passenger, goods, and locomotive storage facilities. Since a reverse loop is included in the layout, no turntable is provided, although the station approaches can easily be suitably extended at any future date. The minimum radius on the plan is a little tight for the Lone Star equipment, but Arnold Rapido, Minitrix, and Piko rolling stock will have no difficulty.

Two of the latest 'Faller' N gauge building kits, very picturesque Mountain Chalets

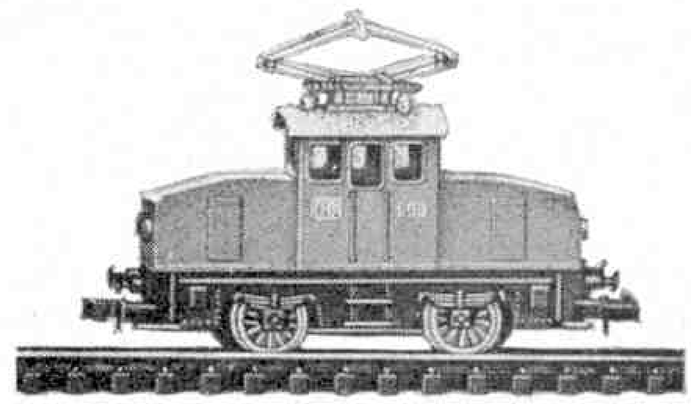


An N gauge layout plan suitable for a 4 ft.×2 ft. layout. The same layout in 00 gauge would need 8 ft.×4 ft.!

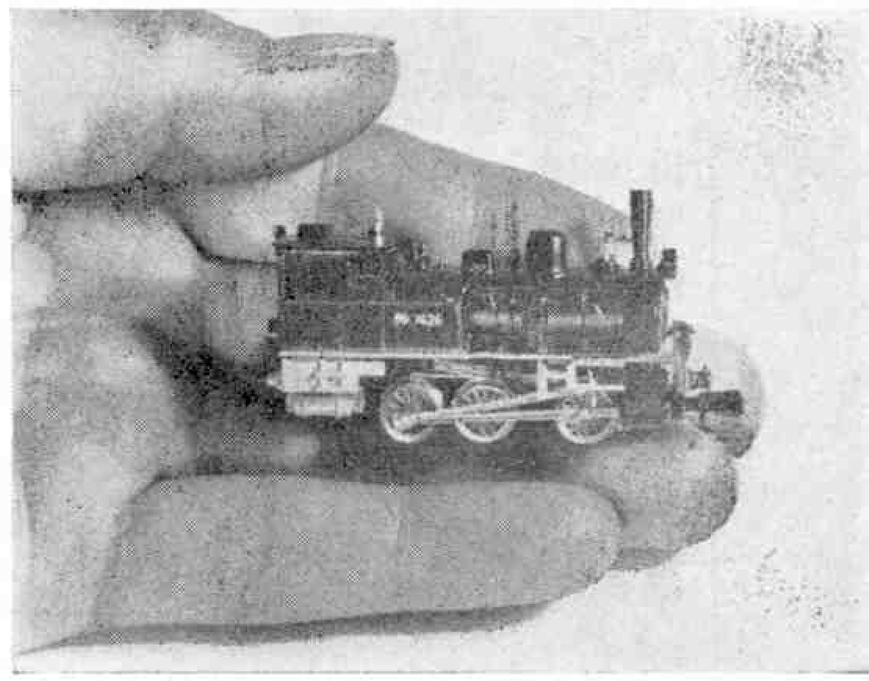
As I've said before, with N gauge, there is a tendency to notice whole areas rather than any individual item, and the *grouping* of buildings is, therefore, quite important. An important rule is never to place houses and scenery in a regular, geometric pattern for this is quite contrary to real life. If your track plan is also of an oval type, try to disguise the tail chasing appearance that this can so often give, by introducing gradients or another level. If it becomes necessary to build scenery over one end of the oval try to blend this in with the surrounding scenery by building it up towards the end of the layout, making the track appear to tunnel beneath it.

Undoubtedly the looped eight design has much to commend it, for besides being a greater length of run for a given area, it can often dispose of the difficulty of disguising the ends of ovals, since two levels have of necessity to be built.

The scenery itself can be built using more or less traditional methods, with a sub base of wire mesh, or hessian impregnated with plaster, on which can be applied the earth mix—usually a mixture of plaster and sand. Remember that the mixture must be finer than for 00, and I would, therefore, not advise the use of sawdust, which has too coarse a texture for N gauge.

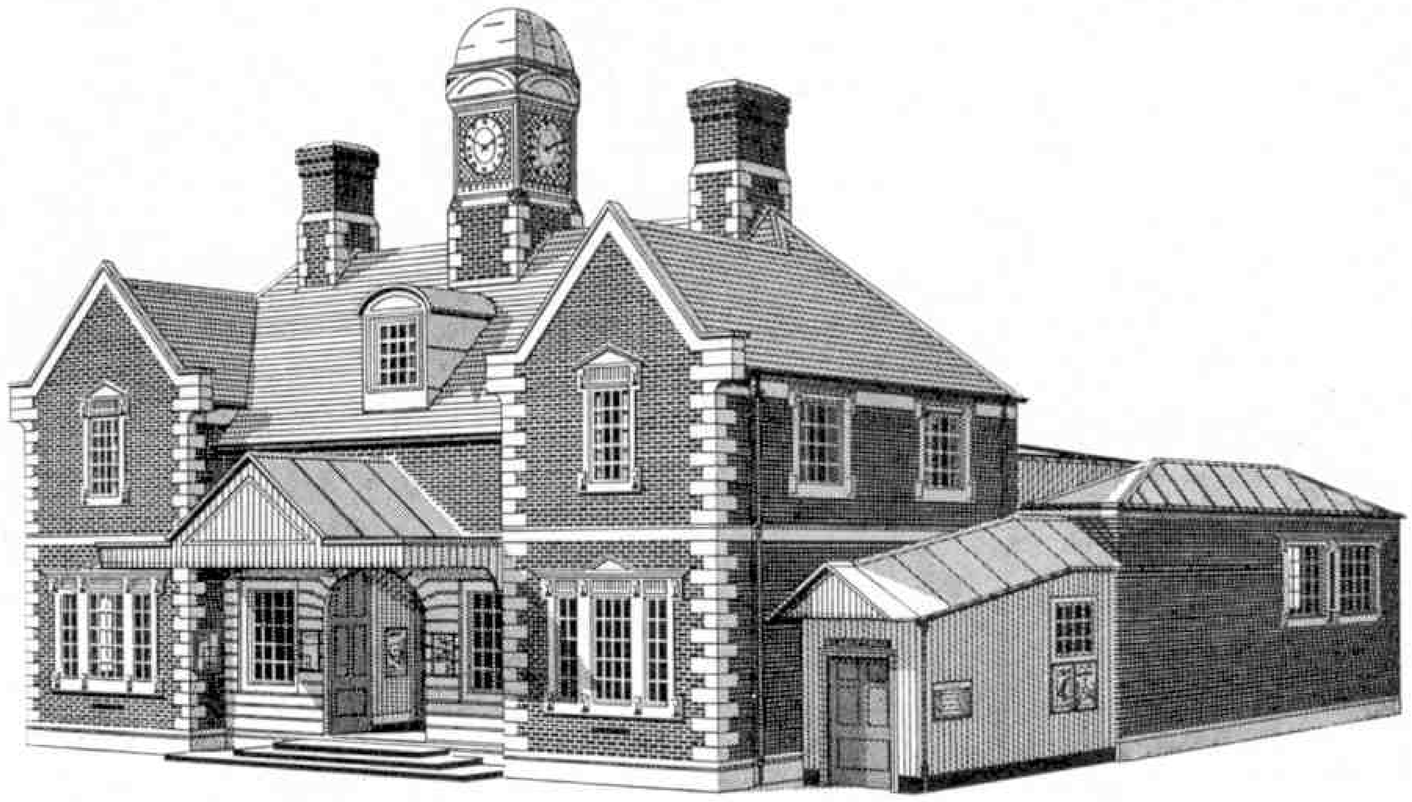


Above: the Arnold Rapido Steeplecab Electric Loco
Below: the Arnold Rapido 0-6-0T—Handsome!
(PECO photos)



THIS SPLENDID RAILWAY TERMINUS

FOR ONLY 9/6



Here at last is the OO gauge model you have been asking for to complete your railway layout. It's a fine looking building in red brick and stone, grey slates and cream boarding with masses of authentic detail from the copper dome of the clock tower to the perfectly scaled posters in full colour. Even the transparent windows are curtained in the right places! It's the best kit so far in the SUPERQUICK range of ready-cut model kits and you can't fail to enjoy making it up—it's a fascinating hobby. Ask your local shop to show you one tomorrow.

SUPERQUICK

MODEL KITS

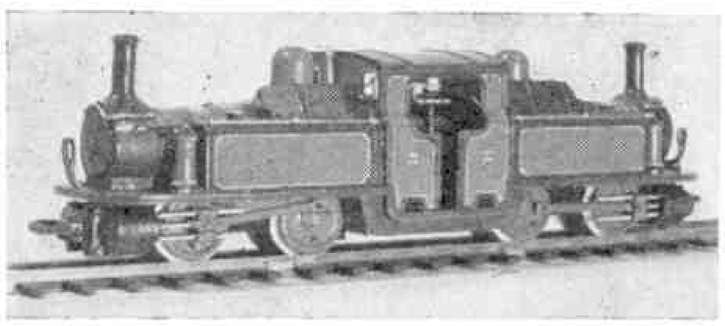
from STORES, MODEL AND TOY SHOPS

Home Trade Distributors—E. KEIL & CO. LTD., Wickford, Essex

Export Distributors—MODEL EXPORTS LTD., 65 London Wall, E.C.2

GEM NARROW-GAUGE KITS

12mm Gauge
—
Produced in collaboration with the Festiniog Railway Company



This "double-Fairlie" forms part of the GEM range of Loco, Coach and Wagons for Narrow-Gauge modellers.

If you are interested in 00, TT, 000 or NG you need the GEM Catalogue. Price 1/6 post free.

A "MUST" FOR EVERY MODELLER

THE GEM DERMIC OILER

provides accurate oiling of intricate working parts.

Ideal for model cars, railways, aeroplanes, etc., etc.,

5/11
(by post 6/6)

GEORGE E. MELLOR (dept. M/M)

31a Rhos Road, Rhos-on-Sea, North Wales

Trade Inquiries Invited.

WILLS

"FINECAST"

"OO" ALL METAL LOCO KITS

Send 1/- for fully illustrated Catalogue of these beautifully detailed loco body kits.

Prices range from 35/- to £5

27 different types to choose from!

Some are designed to fit onto Dublo chassis some for Tri-ang—others have special Finecast chassis available. Assembly is not difficult, parts are glued together. No soldering. Enjoy building your own locomotive.

Send 1/- (in stamps if you wish) for Catalogue now!

R. WILLS (SCIENTIFIC HOBBIES) LTD.

92 Brighton Road, Coulsdon, Surrey

Wills Finecast Kits are manufactured by Industrial Display Co. Ltd., Lower Road, Forest Row, Sussex

AND AWAY WE GO!

Michael with his Curtiss Bomber- starting batteries connected and ready to go

YOU'VE all seen the colourful highly detailed ready-to-fly scale control-line models, temptingly displayed in the local model shop — just *asking* to be taken out of the box and revved up.

Perhaps you have also heard stories about the difficulty of flying these models and their limited performance. They are not cheap, and it's a lot of money to spend speculatively — not knowing just what to expect in the way of flying. Do they fly ? If so, how well ? Which one flies the best ? Are they easy to fly ? Will I need any extra equipment ? These are some of the questions the intending buyer will or *should* ask. The answer to the first question is Yes ! they *do* fly. The second is more difficult to answer but these plastic models *can* be made to perform very well—or at least *some* of them can ! This of course brings us to the thorny question. Which one flies best ?

Well, that's not easy to answer, because some people find a model easy to fly that the next person will dislike and vice versa. But there *are* some important points to bear in mind which will help you to choose the best model for YOU !

It is an unfortunate fact that often the most interesting and attractive models are the worst flyers. In many cases this is because the number of gadgets and accessories on the model increase its weight so much that the poor little engine is unable to provide enough power to fly it well. So it staggers round and round — wallowing up and down (more frequently down) until the tortured plastic eventually gives up and shatters—end of story—modeller takes up boats—several pounds wasted.

After all, these models operate on exactly the same aerodynamic principles as a full size aeroplane and heavy aeroplanes are always more difficult to fly than light ones.

So if you're just starting, what you *really* want is a model that's very easy to fly, and one that will survive several crashes. One with lots of power and one that's light in weight. In other words a tough trainer ! It will not look as warlike as a dive bomber or as sleek as a fighter—but it *will* be cheaper and it *will* fly—and fly well. When you've learned how to handle this one—and got lots of fun out of it (that's guaranteed)—you will be ready to look once more at the bigger scale models—but even then they will never be quite as nippy as your trainer, even though they cost considerably more.

Just to prove our point we had four models in our offices — a Cox Curtiss Bomber, a Cox Spitfire, a Tri-ang-Cox P.T.19 trainer and a Tri-ang-Cox Fledgling. Fourteen-year-old Michael Dean, who had never flown his own control-line model before, was asked to choose one to fly—he immediately went for the big impressive looking Curtiss with its bomb-dropping gear, opening cockpits, etc. It crashed first time out and he wrote-off one wing—entirely due to inexperience. You see, the model, being heavy, needed a hefty launch which was difficult to achieve properly. Then, because of all the drag caused by all the gadgets, the model's acceleration was quite slow, and until it reached its proper flying speed the control-lines tended to be a bit slack, causing the model's control response to be indefinite. It needed an expert hand to keep it in the air until top speed was reached, at which point it would have become much more easy to manage. Then too, it was a windy day— most days are windy in this country—and this tended to blow the model 'in' towards the pilot. When this happens you have to back-step very rapidly to keep those lines tight, otherwise you lose all control—and that's just what happened. Shorter lines would have helped of course, but then the pilot would have been very dizzy indeed when top speed was reached ! Twenty foot lines are about right for fairly calm days. Only experts, flying in windless

Below left: the Spitfire, P.T.19 and Fledgling. Below right: re-fuelling the Fledgling

Continued on page 33

A BOOK FOR CHRISTMAS

Warplanes of the First World War
Fighters Volume I by J. M. Bruce

Following the success of William Green's series of pocketbooks dealing with Warplanes of the Second World War, it was only logical that the publishers should extend the set to cover the 1914-1918 war and J. M. Bruce is one of the leading authorities on the subject. Lots of 'new' photographs and much newly discovered historical data is to be published in this new series.

The first volume deals alphabetically with British aircraft up to 'P'. There are dozens of excellent little 3-view drawings, a tremendous amount of interesting information and a couple of hundred first class photographs to study. When it is complete, this collection of handy little publications will comprise a most comprehensive reference library on this fascinating subject.

Published by Macdonald—**12s. 6d.**

9 Squadron
by T. Mason

The oldest still-active Royal Air Force bomber squadron has its history recounted diary-fashion in this unusual book. A unique insight into the everyday running of a front line operational squadron both in war and peace is here presented. The history extends from 1914 up to 1964. From wood and fabric bi-planes to the mighty Vulcan B2 with which the squadron is now equipped. Pages of photographs illustrate planes and personalities that feature in the text and an appendix lists every aeroplane, together with its serial number and ultimate fate, ever used by the unit. This is a slightly 'specialist' book but immensely absorbing to anyone studying military aviation.

Published by Beaumont Aviation Literature 11 Bath Street, London, E.C.1—**22s. 6d.**

'This is the News'
by Nelson Davis

When you see a television news programme or read a newspaper, how many of you pause to think about the armies of men and machines *behind* the news?. And how was news dispensed before the days of radio and newspapers?

In these days of instant communication by radio and television by space satellite it is difficult to imagine what our world must have been like when none of these miracles was even imagined. This excellent little book with its concise, readable text and great variety of illustrations really takes you *behind* the news. You will see how a modern newspaper is produced and how smoke signals were the radio of *their* day. Highly recommended.

Published by Walrus Books—**12s. 6d.**

Veteran and Vintage Aircraft of the World
compiled by L. Hunt

Development of the aeroplane has taken place so rapidly, that very few special aviation museums are yet established. Even our own Aeronautical Collection at the Science Museum contains only a small proportion of the preserved historical aircraft currently scattered about the country in private collections and on R.A.F. airfields. It is therefore difficult for the uninformed to find out if an example of a particular aircraft still exists and if so—where it can be examined.

Leslie Hunt's data-packed pocket book depicts and locates hundreds of historic aeroplanes all over the world. When you consider the number of machines distributed so widely over the globe the problems of the air historian and the would-be museum curator are more fully appreciated.

The chief criticism is that only the aircraft *locations* are listed alphabetically. It is therefore not easy to trace the existence of a particular *type* of machine. A 'types index' would have been of great value—here's a thought for a later edition.

By the way, all profits from this book go to a very worthy cause—the purchase of a hobbies hut for the 'Trueloves' youngsters—all victims of Muscular Dystrophy,—it's worth your support.

Published by L. Hunt, 90 Woodside, Leigh-on-Sea, Essex—**5s. post free**

Aeromodeller Annual 1965-66

The first 'Annual' appeared in 1948 and it has appeared regularly ever since. It is eagerly awaited by both expert aeromodellers and dabblers in the hobby, every volume being chock-full of plans, and articles on all aspects of aeromodelling.

Of particular appeal to younger readers is a simple way to make 'water rockets' from discarded polythene bottles—and they fly more than 100 ft. high too!

Other features include the year's contest results; engine tests; modern airframe construction; basic single channel radio control; school model building projects, and the Editor of Meccano Magazine writes about model engine collecting.

Published by Model Aeronautical Press Ltd., 13/35 Bridge Street, Hemel Hempstead, Herts.—**10s. 6d.**

Electric Model Car Racing
by D. J. Laidlaw Dickson

Most people who buy a model car racing set never get beyond the ready made over-the-counter car and track. There are, however, many, many enthusiasts who want to go further and faster. Building your own racer can be very simple or it can be a precision engineering project—as simple or complex as you like or as your skill and equipment dictate.

This very comprehensive book deals with an enormous variety of racing topics—chassis building, finishing, car lighting, dragsters, track construction, scenic modelling, clubs and competitions. It is well illustrated with many clear line drawings and photographs and will supply most of the answers to the questions of both newcomer and converted.

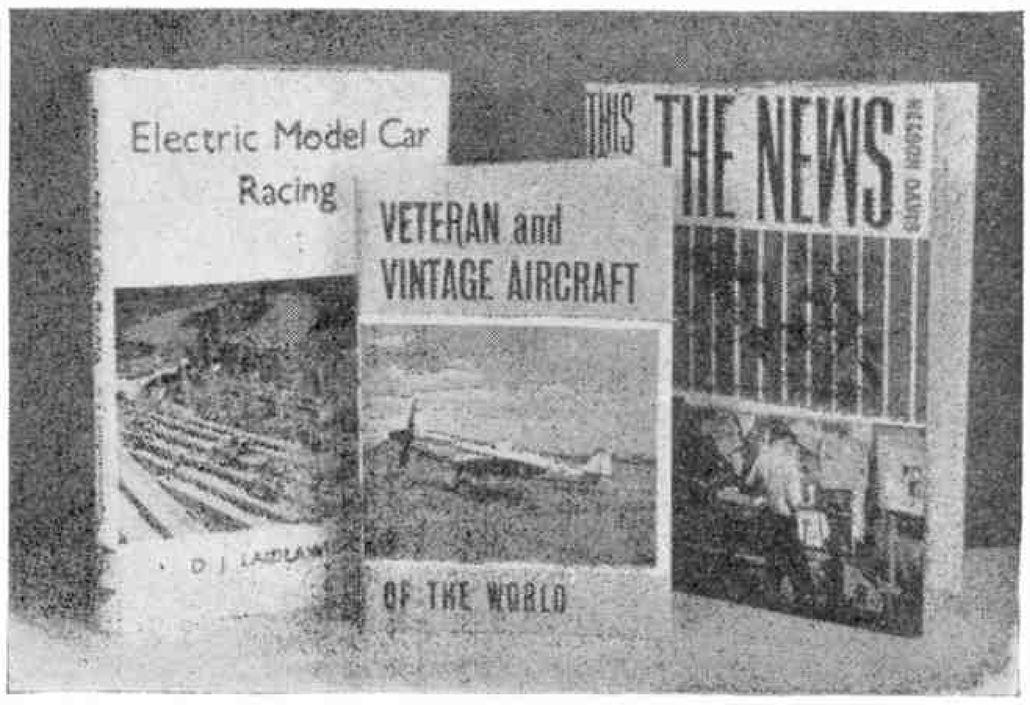
Published by Museum Press Ltd., 26 Old Brompton Road, S.W.7.—**21s. 0d.**

Aircraft Profiles

More and more plastic kit builders are no longer content to paint their models 'according to the diagram supplied'. Many are also avid 'modifiers'—using the kit parts as a basis for a different version of the prototype. The latter pursuit is made easier because of the almost unlimited amount of technical 'gen' readily available on most aircraft.

Continued on page 35

The opened book in the foreground is the bound volume of 'Profiles' reviewed on this page



ALFRED HITCHCOCK'S SOLVE-THEM YOURSELF MYSTERIES

The Boy Electrician

(8th edition revised) *Revised by 'ARMAC'*

"Endless useful information of a technical kind"—*Lady*. "A first-class handbook"—*Boy's Own Paper*.

Illustrated. 18*s*.

Battle for Britain

RONALD W. CLARK

This graphic account of the 16-week air struggle that changed the course of history will appeal particularly to those too young in 1940 to know what the Battle was about. *Illustrated*. 18*s*. 6*d*.

Experiments with Everyday Things *(2nd impression)*

GEORGE BARR

"Provides a lot of fun"—*BBC Children's Hour*. "This excellent book introduces over 150 topics"—*School Librarian*. *Illustrated*. 15*s*.

Wireless for Beginners *(5th edition)*

BOLTZ & RODDAM

"Probably the most popular technical introduction of its kind." — *Nursery World*. "A good buy'." — *Practical Wireless*. *Ilustrated*. 18*s*.

Harrap Books

The Man Who Never Was Ewen Montagu

The Story of Madam Tussaud Leonard Cottrell

Return of the Tiger Brian Connell

Exciting Cadet editions of these famous books

All illustrated 13/6 each from all booksellers

Evans

Christmas Stories Round the World

An attractive collection of Christmas stories from 14 countries around the world which entertain as well as tell you how the holiday is celebrated in other lands. Among the countries visited are Austria, Iceland, Sweden and Mexico. Each story is prefaced with Christmas customs in each country and there are biographical notes on each author. Edited by Lois Johnson the book has line illustrations by Beth Krush. **12s 6d net**

FREDERICK WARNE
1-4 Bedford Court, London, W.C.2

---

11 BATH STREET
LONDON - E.C.1

We specialise exclusively in books and magazines on every aspect of aviation, together with photographs and plans of aircraft. Thousands of new and second-hand books and nearly a quarter of a million magazines in stock.

First class postal service.

Send 1/- stamp for catalogue.

Books bought, sold and exchanged.

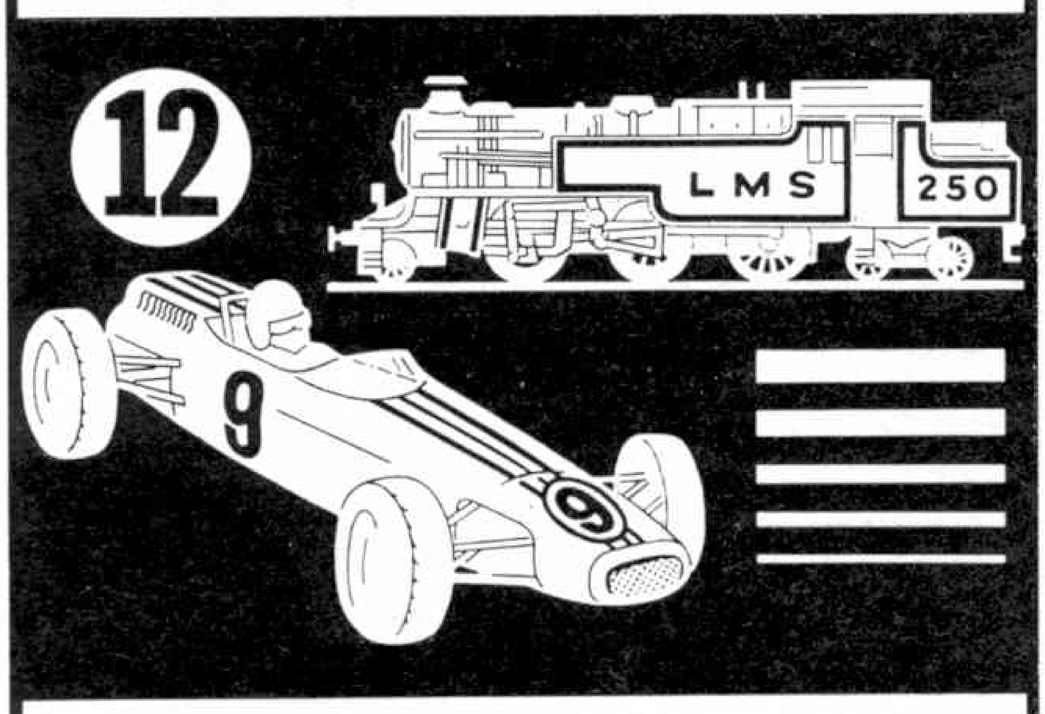
Open daily 9.30 a.m. to 6 p.m.

Nearest Underground Station Old Street.

Beaumont Aviation Literature

aviation books

NEW! modellers' dry print



RUB-ON LETTERS & STRIPES

Give your models a professional finish and save hours of work by using Blick Modellers' Dry Print.
Just rub over and the characters appear—it's as easy as that!

Letters and Numbers in Black, White and Gold 1/- per packet
Rub-on Stripes in Red, White and Gold 2/- per packet

See your local model shop for this exciting new product and look out for additions to the range.

BLICK OFFICE EQUIPMENT LTD
(Dry Print Division) 83 Copers Cope Road Beckenham Kent

Pergamon Press Publications

Science for High School Students

H. Messel

This book explores the world of science and gives a fascinating account of most subjects related to our present scientific knowledge.
1040 pages Available in two volumes at 40s each or in one volume at 70s

All-Round Science Quiz

Dorothy M. Diamond

A light-hearted collection of over 120 quiz-type scientific puzzles based on the science taught in secondary schools.
104 pages Flexi-cover 7s 6d Hard cover 15s

Primary Science Activities

G. N. Conduct

These science cards, in four sets, aim to provide children with a basic knowledge of scientific method. They will be useful to all children at primary school.
Each set contains 18 cards at 7s 6d per set

Pergamon Press

Headington Hill Hall, Oxford

Electric Model Car Racing

D. J. Laidlaw-Dickson. This book provides enthusiasts of this new exciting hobby with expert guidance that will enable them to build and run model cars that are at least as good as (and much cheaper than) any that can be bought. *Illustrated 21/-*

AEROMODELLING

R. H. Warring. A comprehensive handbook for aeromodellers, giving detailed instructions for construction and operation of all types of models. *Illustrated 25/-*

Museum Press
26 Old Brompton Road
London SW7

Are you an ambitious chess player?

Any chess player will tell you about Bell Chess Books. The ambitious player will inevitably read them. Are you ambitious? Bell is *the* name in chess literature. Write for our catalogue.

BELL CHESS BOOKS
G. BELL & SONS · 6 PORTUGAL ST · LONDON W.C.2

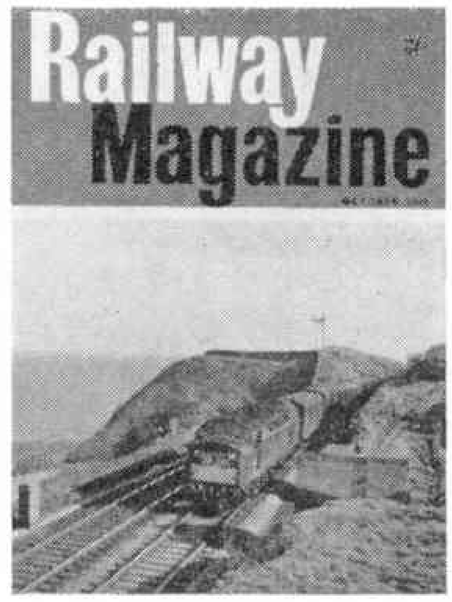
TRAINS • TRAINS YESTERDAY • TRAINS TODAY • TRAINS TOMORROW

And not only trains either—tracks, stations and bridges too.
Every month you can read all about them, and we do mean *all*, in

RAILWAY MAGAZINE the paper that really knows.

Quick. Start a whispering campaign. Make sure present-buyers think of RAILWAY MAGAZINE when they think of you. Easy solution for them. A year's exciting reading for you (and a year's subscription is only 36s.)

RAILWAY MAGAZINE Subscriptions through NTP Sales & Distribution Limited, 40 Bowling Green Lane, London, E.C.1.



WALT DISNEY'S True Life Adventures

BATTERED BRIDEGROOMS
© 1964
Walt Disney Productions
World Rights Reserved
WHEN BULL SEALS REACH THE BREEDING ISLANDS THEY ARE PLUMP AND SLEEK. THEN FOR A MONTH THEY NEITHER EAT NOR SLEEP, BUT FIGHT CONTINUOUSLY.
THEY ARE A SORRY-LOOKING LOT WHEN THEIR BRIDES FINALLY ARRIVE.
Distributed by King Features Syndicate.
9-4

SAGA of SURVIVAL
© 1964
Walt Disney Productions
World Rights Reserved
ON THE SPARSE DESERTS, THE YUCCA'S LEAVES ARE SHARP AND STEEL-HARD TO REPEL HUNGRY BROWSERS.
BUT ON THE LUSH MEXICAN TABLELANDS, WHERE WATER AND FOOD ARE PLENTIFUL, THE YUCCA GROWS INTO A TREE WITH BLUNTED, HARMLESS LEAVES.
Distributed by King Features Syndicate.
9-5

And Away We Go—from page 29

conditions, can fly on longer ones. Michael was disappointed—who wouldn't be? So we said 'have a go with the little Fledgling'.

Twenty foot lines were laid out, securely fastened to the handle and model, and the motor started. By the way, the Fledgling, with its exposed engine cylinder, was much easier for a beginner to start — the Curtiss's engine, being cowled-in, needed more know-how.

Contact! The Fledgling literally leapt out of our hands and because of its light weight accelerated rapidly, responding to the controls beautifully. It almost flew itself and before we knew it the tank was dry and Michael had to think about getting down safely! Well, the 'landing' *was* a bit rough! in fact the wing came off on impact—but that didn't matter because it was fastened on with rubber bands, so it was only a minute's job to replace it.

Our pilot was so delighted that he forgot about his earlier troubles and was just bursting to get going again, which he did, again, and again, until we ran out of fuel.

Michael is now rapidly gaining experience and he'll soon be an expert—good enough to handle that bigger model in due course, but if we hadn't given him the Fledgling he would never have flown again after his initial disappointment.

As they say on tele' 'this story is true'!

One or two passing comments—The control lines supplied with the Cox models are specially prepared for the job, *don't* use fishing line or other stretchable materials.

Never allow the lines to get wet (from the grass)—they tend to stick together and you'll lose control.

There is another trainer in the Tri-ang-Cox range (the P.T.19) that you may prefer to the Fledgling; it's bigger and a bit dearer, but it also has rubber band fixings, so is very crash resistant.

The choice of model is up to you but *do* think before you buy!

NEW TELESCOPIC SIGHT

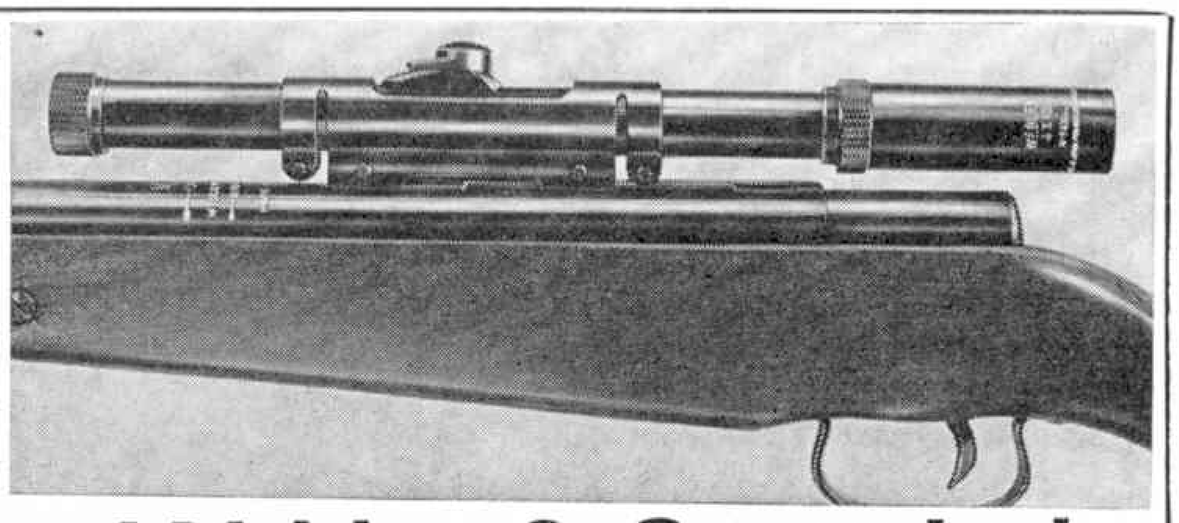
BY WORLD-FAMOUS OPTICS EXPERTS

WEBLEY 415

Now . . . the most modern and up to date rifle and small bore rifle shooting! The new **Webley 415** is a really robust metal telescopic sight with powerful 4× magnification for ·177, ·22 rifles. Made to Webley's own specifications by leading Japanese optic experts. New features include: ✱Adjustable mount for ½″ rifle receivers ✱Coated lenses ✱Adjustable eyepiece for clear focusing ✱Click-adjusting reticule sight, lateral and vertical ✱Easy adjustment for eye relief ✱Supplied with dust covers.

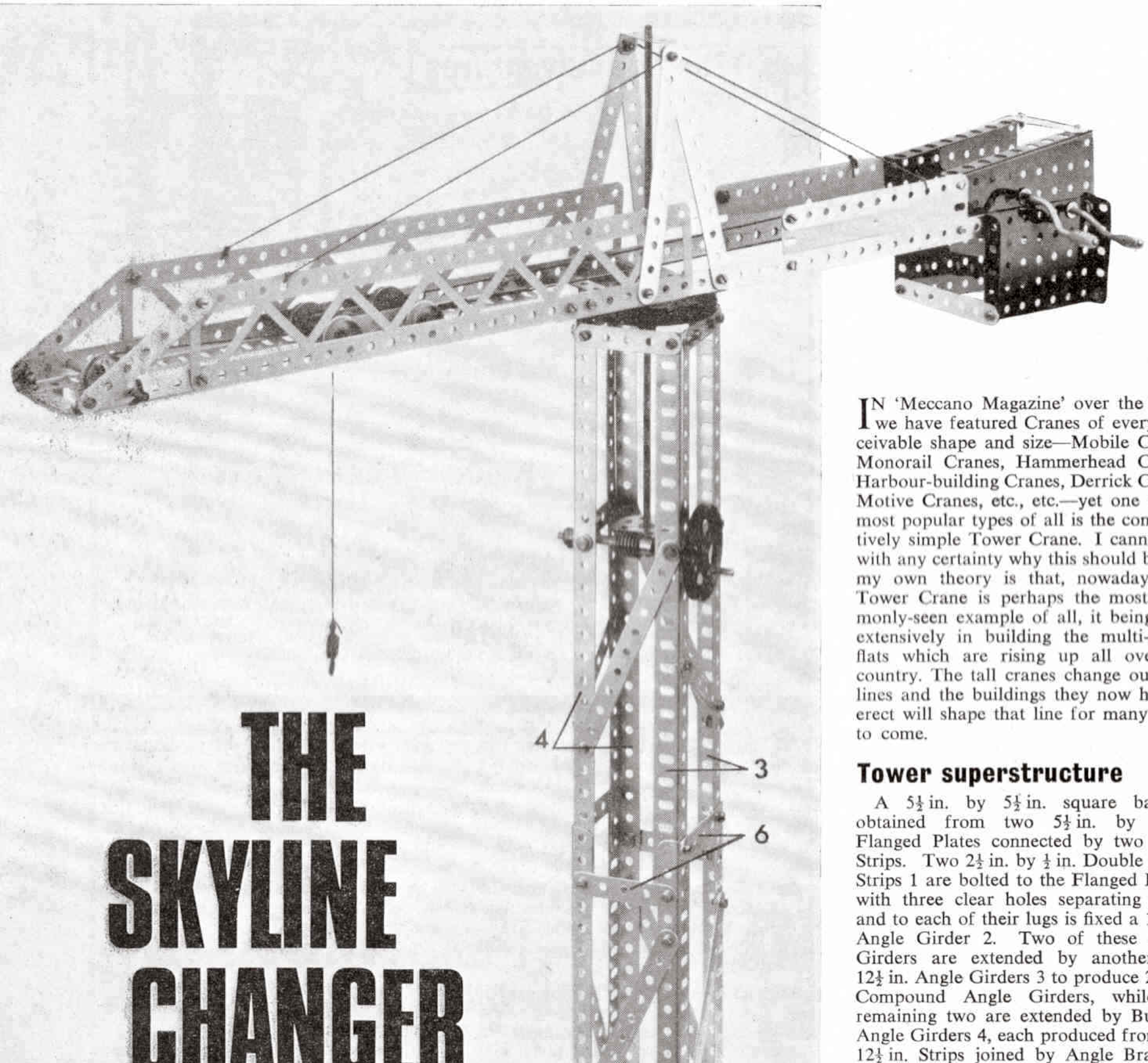
A 'must' for all air rifle users at a remarkably low price!

From all Webley Stockists, PRICE £3 (No Tax)



Webley & Scott Ltd

89 Park Lane, Handsworth, Birmingham 21



THE SKYLINE CHANGER

"Spanner" builds a tower crane

IN 'Meccano Magazine' over the years, we have featured Cranes of every conceivable shape and size—Mobile Cranes, Monorail Cranes, Hammerhead Cranes, Harbour-building Cranes, Derrick Cranes, Motive Cranes, etc., etc.—yet one of the most popular types of all is the comparatively simple Tower Crane. I cannot say with any certainty why this should be, but my own theory is that, nowadays, the Tower Crane is perhaps the most commonly-seen example of all, it being used extensively in building the multi-storey flats which are rising up all over the country. The tall cranes change our skylines and the buildings they now help to erect will shape that line for many years to come.

Tower superstructure

A 5½ in. by 5½ in. square base is obtained from two 5½ in. by 2½ in. Flanged Plates connected by two 5½ in. Strips. Two 2½ in. by ½ in. Double Angle Strips 1 are bolted to the Flanged Plates, with three clear holes separating them, and to each of their lugs is fixed a 12½ in. Angle Girder 2. Two of these Angle Girders are extended by another two 12½ in. Angle Girders 3 to produce 23½ in. Compound Angle Girders, while the remaining two are extended by Built-up Angle Girders 4, each produced from two 12½ in. Strips joined by Angle Brackets. These also result in 23½ in. Compound Angle Girders.

At the top, the large Compound Girders are connected by four 2½ in. Strips 5 and another four Strips 6 are added approximately half-way down, as shown. Angle Girders 3 are connected through their tenth holes down, again by a 2½ in. Strip 7, as also are Built-up Angle Girders 4. Strips 7 are joined through their centre holes by a 2½ in. by ½ in. Double Angle Strip 8. Corresponding Strips 5 are, in turn, joined by two 2½ in. by ½ in. Double Angle Strips, to which a 3 in. Pulley 9 is fixed by ⅜ in. Bolts. Bracing Strips are then provided by ten 5½ in. Strips and two 3 in. Strips.

The jib

The jib is not at all difficult to build. Two 12½ in. Angle Girders 10 are each

extended 23 holes by a 12½ in. Strip 11, at the same time bolting a 12½ in. Braced Girder 12 in position. Secured to each Strip 11 are a Flanged Sector Plate 13, a 3½ in. by 2½ in. Flanged Plate 14, and a 5½ in. by 1½ in. Flexible Plate 15, overlayed along its upper edge by a 5½ in. Strip.

Sector Plates 13 are joined by a 2½ in. Strip 16, Flanged Plates 14 by two 3½ in. Strips 17, and Strips 11 by two 2½ in. by ½ in. Double Angle Strips 18, at the same time fixing 5½ in. Strips 19 in place. These Strips are brought together and joined at the top by a 1½ in. by ½ in. Double Angle Strip. Each Braced Girder and Angle Girder 10 are connected by a 3½ in. Strip 20, then two lengths of Cord are added to improve appearances.

A 3½ in. Rod 21, on which a 1 in. loose Pulley is held by Spring Clips, is mounted in the third holes of Angle Girders 10, Spring Clips also holding this in place. At the opposite end of the jib a 5 in. Crank Handle 22 and a 3½ in. Crank Handle 23, carrying a 1 in. fixed Pulley, are journalled in Flanged Sector Plates 13, again held by Spring Clips. Finally, a 3 in. Pulley 24 is attached to Double Angle Strips 18 by ½ in. Bolts.

The completed unit is then fixed on an 11½ in. Rod 25, loosely journalled in the boss of Pulley 9 and Double Angle Strip 8, a Collar beneath Pulley 9 holding it in place. Fixed on the Rod is a 57-teeth Gear Wheel 26, and in constant mesh with this Gear, is a Worm 27 on a 3½ in. Rod journalled in one Angle Girder 3 and one Built-up Angle Girder 4. The Rod is held in position by a Collar and a 2 in. Pulley, in which a Threaded Pin is fixed to serve as a handle to control the slewing movement of the jib.

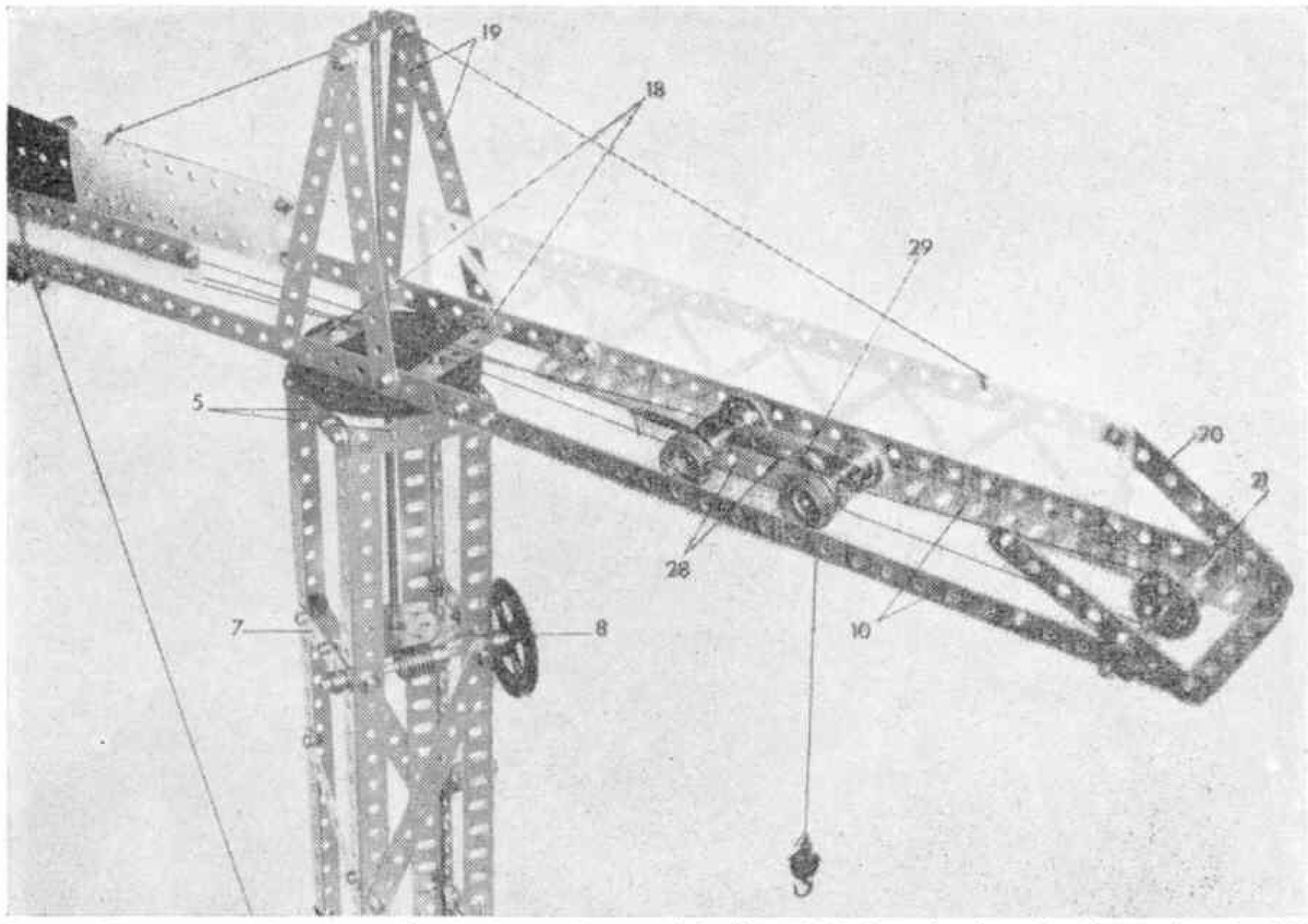
The trolley

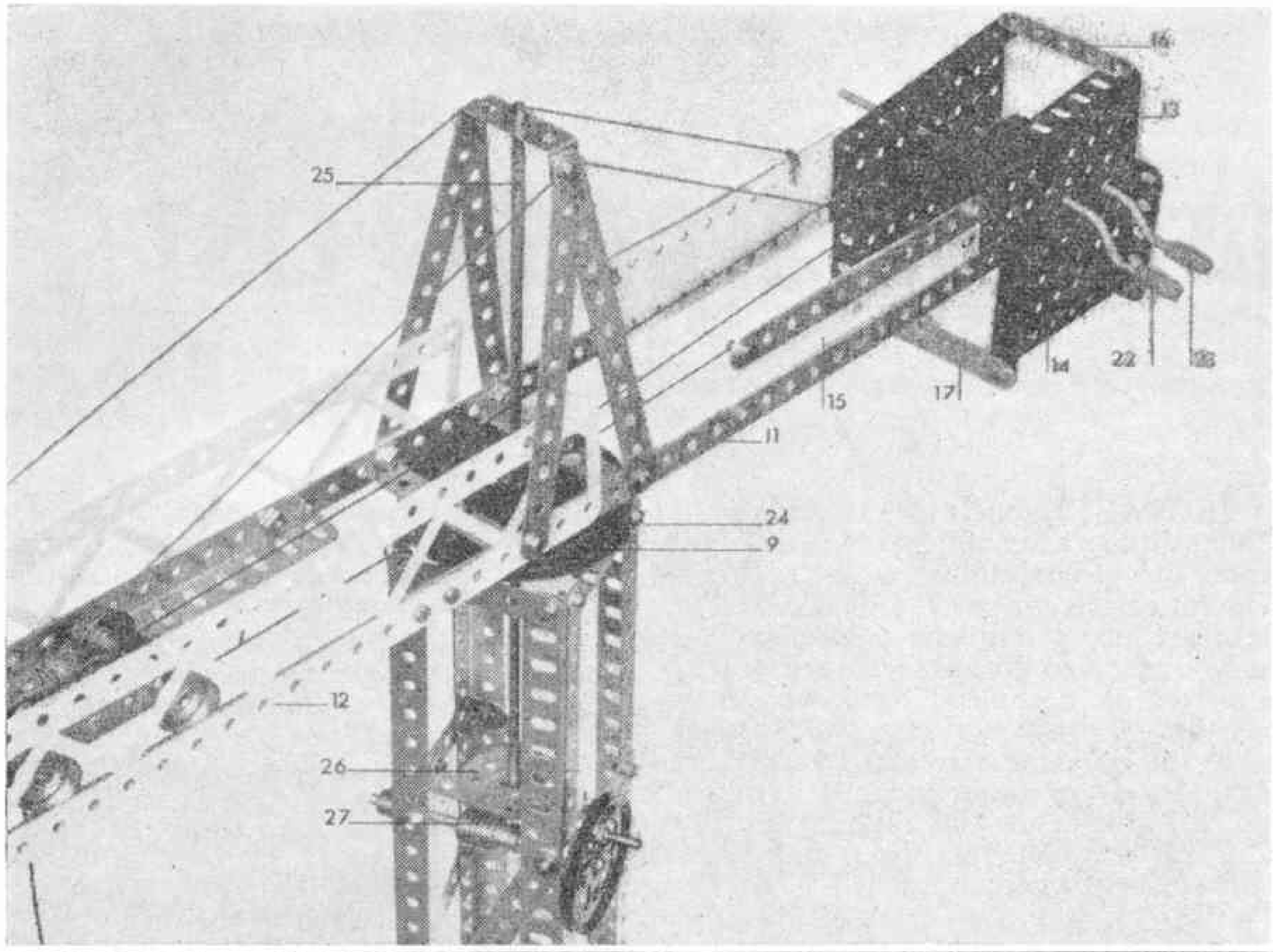
A trolley running on the lower flanges of Angle Girders 10 is built up from two 2½ in. Strips 28 mounted on two 1½ in. Rods and held apart by a Double Bracket on each Rod. The Rods also carry a ¾ in. Flanged Wheel at each end. A ½ in. loose Pulley 29 is mounted on a ¾ in. Bolt fixed in Strips 28.

A length of Cord is tied to a Driving Band fixed to the rear Double Bracket, is wound round the Pulley on Crank Handle 23, is passed round the Pulley on Rod 21 and is tied to the other Double Bracket, being kept as taut as possible. Another length of Cord, to one end of which a hook is fixed, is secured to Crank Handle 22 and is passed over ½ in. Pulley 29 to complete the model.

Parts required

6 of No. 1	1 of No. 19s	1 of No. 48
18 of No. 2	1 of No. 20a	7 of No. 48a
4 of No. 3	4 of No. 20b	2 of No. 52
2 of No. 4	1 of No. 22	2 of No. 53
14 of No. 5	1 of No. 22a	2 of No. 54
8 of No. 8	1 of No. 23	1 of No. 57c
2 of No. 11	1 of No. 27a	2 of No. 59
4 of No. 12	1 of No. 32	2 of No. 99
1 of No. 13	7 of No. 35	1 of No. 111
2 of No. 16	104 of No. 37a	4 of No. 111c
2 of No. 18a	97 of No. 37b	1 of No. 115
2 of No. 19b	18 of No. 38	1 of No. 186
1 of No. 19h	1 of No. 40	2 of No. 189





Above: This view of the crane clearly shows the small trolley which travels along the forward part of the jib. Below: A close-up view showing the rear end of the jib and the slewing arrangement. Note that ordinary Crank Handles can be substituted for the now obsolete Crank Handles with grip

A Book for Christmas continued from page 30

Colours are a different matter. How do you *describe* 'Desert Pink' or 'Dark Earth' or 'Medium Sea Grey'? Well of course there's only one way and that's to *show* the true colour. Profiles—inexpensive booklets each describing and illustrating a particular aeroplane—also include beautifully prepared full colour diagrams showing several basic variations and (where applicable) unit crests and markings. These booklets covering aircraft from World War I to the present day are published at regular frequent intervals, and a comprehensive programme is planned for the months ahead. Full details of this are available on request from the publishers upon receipt of a stamped and addressed envelope. Single 'Profiles' cost **2s. 6d.**, each and you can get a beautifully bound presentation volume containing the first 24 'Profiles' for **60s. 0d.**

A subscription will ensure a regular supply of forthcoming 'Profiles' which will be mailed to you direct, as they appear. Here's the answer to that gift problem. A 'sub' or a bound volume would be guaranteed to please an aircraft fan or modeller of *any* age.
Published by Profile Publications Ltd., Box 26, 1a North Street, Leatherhead, Surrey.

Electric Railways
by B. K. Cooper

An informative book on the development of electric railways and locomotives both at home and abroad. It has 67 pp plus 16 pp half tone illustrations and 13 line drawings in a format of 7½ in. by 5 in. Anyone with a basic knowledge of electricity will have no difficulty in understanding and appreciating this fascinating book, which describes in simple terms the construction of electric traction motors, the history, development, and merits of electric traction generally, and also the various methods of current collection in use in many countries of the world. Altogether an excellent book for both beginner and expert, whether students of electric traction or not.
Published by Ian Allen Ltd., Terminal House, Shepperton, Middlesex.—**10s. 6d.**

Meccano Model Aircraft are not as common as most other types of constructions, but this simple Jet Plane should help to fill the gap

OFF THE SECRETS LIST . . .

. . . the Meccano Delta Jet

AIRCRAFT models in Meccano are not quite as common as many other types of constructions, such as road vehicles or fairground amusements. Yet there are many builders, particularly in the younger age groups, who are deeply interested in aeroplanes and who may feel that they are not very well catered for in the standard Meccano Instructions Manuals. I am rather inclined to agree, and so I give below full building instructions for a small Jet Plane that looks most realistic when completed.

It is built not from a specific Outfit, but from a collection of different parts. This need not deter you, however, as you should be able to modify the model to suit the parts you possess, if you do not own everything itemised in the parts list at the end of the page. It is an easy model to build and should not present you with any problems.

A 5½ in. by 1½ in. Flexible Plate 1 is shaped into a cylinder by overlapping the ends of the Plate a distance of three holes and at the same time bolting in place a 4½ in. Narrow Strip 2 bent into a 'U' shape. Another 'U' shaped 4½ in. Strip 3 is bolted to Plate 1, at the same time fixing two shaped 5½ in. Narrow Strips 4 in position, one at each side. A Threaded Pin 5 is bolted to Strips 2 and 3 at the front.

The remainder of the fuselage is filled in by four 2½ in. by 1½ in. Triangular Flexible Plates 6, bolted to Strips 4, the two top Plates being held together by a Rod Socket 7, and the two lower Plates by an ordinary Nut and Bolt. Mounted in the Rod Socket is a 1½ in. Rod which acts as a radio antenna.

Two 1½ in. Corner Brackets 8, formed into a parallelogram, are secured between Strips 4, the front Bolt also carrying two Washers placed one each side of the Corner Bracket. The Corner Brackets are extended by a 2½ in. by 1½ in. Triangular Flexible Plate 9, to complete the fin, while the tailplane is built up from another two 2½ in. by 1½ in. Triangular Flexible Plates, fixed to the fin by Angle Brackets.

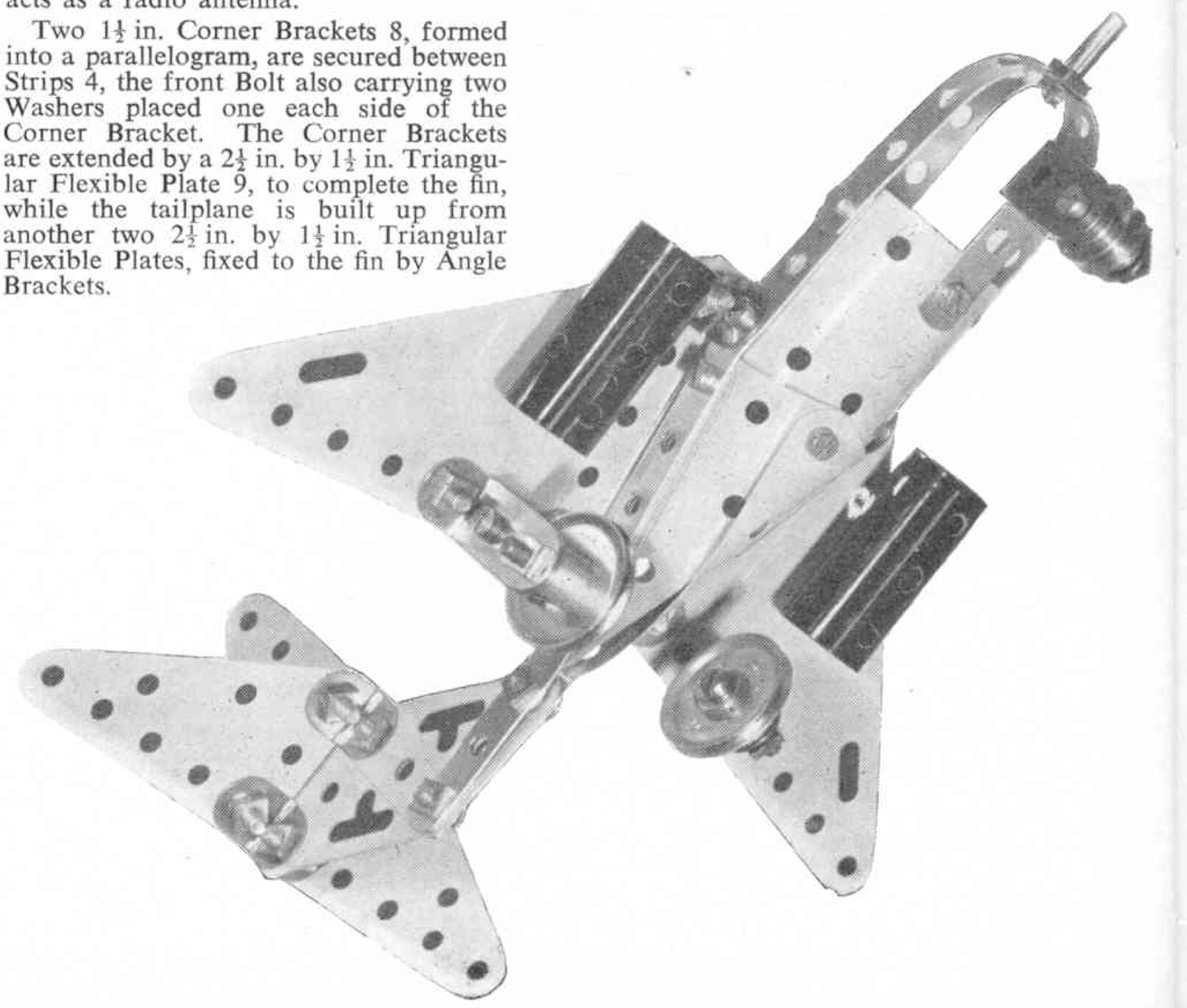
Each wing is represented by a 3½ in. by 2½ in. Triangular Flexible Plate 10, secured to the fuselage by two Angle Brackets. Attached to the underside of the wing is a Sleeve Piece forming the engine nacelle. Note that the Bolt holding this Sleeve Piece in place passes through one of the elongated holes of the Triangular Plate and is, therefore, fitted with a Washer.

A tricycle undercarriage is fitted, the main landing wheels being built up from 1 in. Pulleys with boss 11, loose on ¾ in. Bolts with a Washer placed between the boltheads and the Pulleys. A 1 in. by ½ in. Angle Bracket is bolted beneath each wing then a Fishplate is fixed on to the 1 in. lug of this Angle Bracket so that its circular hole is in line with the elongated hole of the Angle Bracket. The ¾ in. Bolt is lock-nutted through this hole, as shown. The nosewheel is a ½ in. Pulley without boss 12, mounted along with six Washers on a ¾ in. Bolt lock-nutted in the end holes of a 1 in. by ½ in. Double Bracket. This Double Bracket is bolted to Narrow Strip 2.

Parts required

2 of No. 10	1 of No. 23	2 of No. 133
1 of No. 11a	35 of No. 37a	1 of No. 179
8 of No. 12	29 of No. 37b	1 of No. 189
2 of No. 12b	14 of No. 38	7 of No. 221
1 of No. 18a	3 of No. 111	2 of No. 226
2 of No. 22	1 of No. 115	2 of No. 235d
		2 of No. 235f

An underneath view of the aircraft showing the undercarriage and engine nacelles



car outline COMPETITION

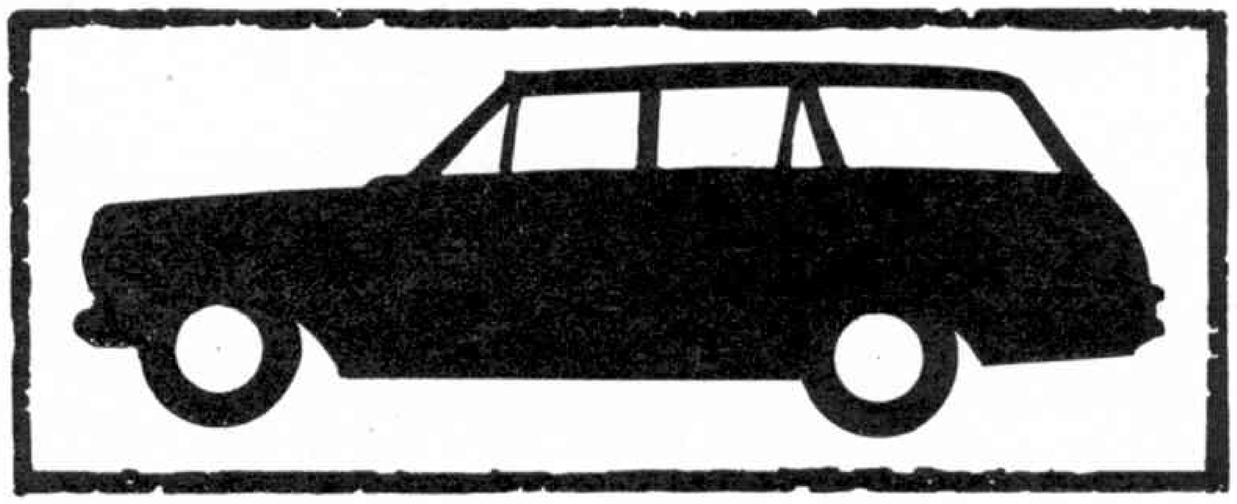
50 Dinky Toy Models to be won!

Fill out the form and send it to us. The names of the senders of the first 50 correct answers will be published in the next issue of Meccano Magazine. The winners will then be expected to write to us to claim their prize. The competition will be judged by the Editor of Meccano Magazine. His decision will be final and no correspondence can be entered into.

FIVE CARS will be reserved for OVERSEAS READERS. These will be selected one month after publication date.

To:—Meccano Magazine: Competition G, St. Alphage House, Fore Street, London, E.C.2.

The vehicle illustrated is:—



.....

.....

.....

NAME .....

ADDRESS .....

.....

DINKY TOY WINNERS

BELOW is a list of fifty names of readers whose entries for last month's 'Silhouette Competition, were the first correct answers to be selected by the Editor. If your name appears in this list, then write on a postcard to: *Silhouette Prize, Meccano Magazine, Thomas Skinner & Co. Ltd., St. Alphage House, Fore Street, London, E.C.2.* and claim your FREE Dinky Model Triumph Vitesse. If your name does not appear in this list even though you entered for the competition, don't be too disappointed—try again!

Richard Austin, Redland Grove, Carlton, Nottingham. *Stuart Barber,* Sillvet Lane, Purley, Surrey. *Clive Barker,* Ferndale Ave., Thornham, Rochdale, Lancs. *Keith Booker,* Hill Top Close Loughton, Essex. *S. Booth,* Union St., Dunstable, Beds. *Michael Clark,* Waterloo Ave., Leiston, Suffolk. *Alan Cross,* Glan Y Wern, Tyn Y, Groes Conway, Caerns, N. Wales. *Clive Davenport,* Holm Terrace, Wigan, Lancs. *Patrick Downton,* Linden Drive, Evington, Leicester. *Christopher DuPont,* Swan Hill House, Peterborough. *C. Gordon-Foxwell,* Tenby Ave., Kenton, Harrow, Middx. *A. Fromant,* Bastern Green Rd., Coventry. *Nigel Garforth,* Ravenshouse Road, Scout Hill, Dewsbury, Yorks. *I. Garrick,* 'Tedville', Forfar, Angus. *Terry Gibbins,* High St., Rippingale, Bourne, Lincs. *Benny Goodman,* Highlands Close, Chalfont St. Peter, Bucks. *L. Greenhorn,* Polwarth Ave., Brightons, Falkirk, Stirlingshire, Scotland. *Peter Gregory,* Ravenscourt Park Mansions, Dalling Rd., Hammersmith, London W.6. *P. Grice,* Kirkdale Crescent, Sheffield 13. *D. Griffiths,* Romford Road, Chiggwell Row, Essex. *Robert Harris,* Melbourne Rd., Balby, Doncaster, Yorks. *C. Heather,* Eastfield Rd., Dagenham, Essex. *Julian Hill,* Shire Oak, Headingley, Leeds 6. *Robin Hill,* Cotman Close, Great Barr, Birmingham 22a. *Simon Holt,* Gort Road, West Howe, Bournemouth, Hampshire. *A. Hurst,* Wainfleet, Skegness, Lincs. *D. Jacobs,* Cleeve Drive, Cleeve, Nr. Bristol, Somerset. *N. Jacques,* Peckover Drive, Pudsey, Yorks. *Timothy Jeans,* Riding Mill, Northumberland. *N. Johnson,* Station Road, Watlington, Kings Lynn, Norfolk. *J. C. Pryce Jones,* Victoria St., Oswestry, Shropshire, England. *S. King,* Buryfield Rd., Solihull, Warwickshire. *R. Lee,* Lodge Ave., Dagenham, Essex. *P. Leverkus,* Thetford, Norfolk. *E. Moffatt,* Chesterton Hall Crescent, Cambridge. *P. Nicholas,* Woodstock Rd., Oxford. *D. M. Phillips,* Willifield Way, London N.W.11. *J. Riley,* Alexandra Rd., Sixbells, Abertillery, Monmouthshire. *P. Rowley,* St. Vincents Farm, Waltham Abbey, Essex. *S. Shales,* Woodland Way, Theydon Bois. Epping, Essex. *R. L. Smith,* Stratton, Hints, Tamworth, Staffs. *P. Snelling,* Withypitts, Turners Hill, Sussex. *William Spooner,* Park Road, Hounslow, Middx. *R. G. Thompson,* Kilnstones, Underbarrow Rd., Westmoreland. *R. Tuey,* Kelvedon, Colchester, Essex.

The names of winners from overseas will be printed in next months issue

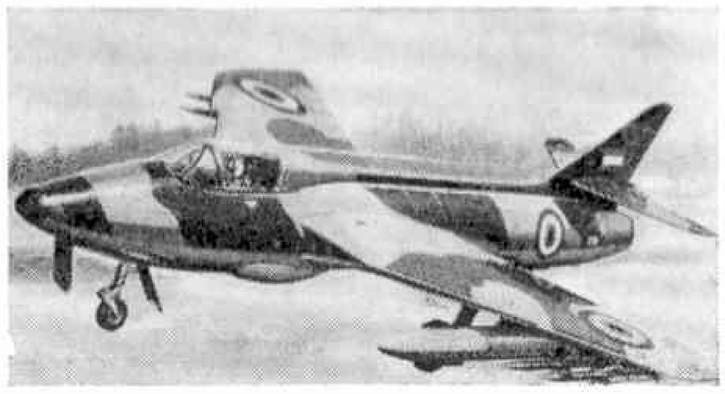
Giant Aircraft Kits at 8/11—by

UPC

# of course!

Above: F86D Sabre

Below: Hawker Hunter



1:50 SCALE MODELS IN FANTASTIC DETAIL

Never before have you been able to buy such outstanding kits at such low prices. There are six 'planes in this UPC series—and just look what you get for your money:—

Accurately scaled engines—many removable from the assembled model; movable flying surfaces; all-action ground and air crews; minutely detailed assembly instructions; authentic transfers . . . and lots more.

Illustrated are just two from this great new series; the others are the Starfighter; the P.38 Lightning, the ME 262 Messerschmitt, and in 1/72 scale the fabulous Martin Bomber.

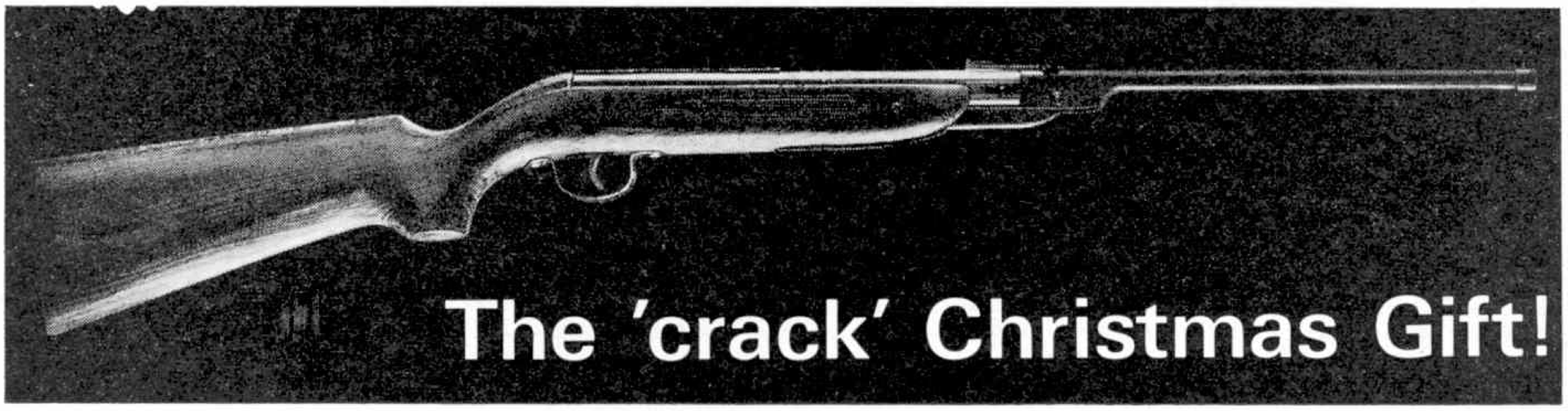
And don't forget, there are UPC Military Kits as well at prices from 8/11 to 59/11.

The outstanding construction kits of the year!

LOOK FOR THE UPC SYMBOL IN YOUR LOCAL HOBBY SHOP

or write for the name of your nearest stockist to the sole U.K. distributors:

(RIKO) RICHARD KOHNSTAM LTD. 13-15a High Street, Hemel Hempstead, Herts.



WORLD FAMOUS **Webley** **'JAGUAR' AIR RIFLE**

plus full Shooting Kit*-all for £6·17·6!

What a wonderful gift . . . the finest practice air rifle in the world today and **complete shooting kit** to go with it! The 'Jaguar' is a beautiful smooth-action rifle made by *real gun craftsmen* . . . Webley craftsmen! And Webley, remember, has been the leading name in guns since 1790. This is the gun for years of exciting *bullseye* pleasure.

WEBLEY 'JAGUAR'
☐ Semi-Bead Foresight ☐ Wheel Adjustable Rear Sight ☐ Length of Stock 13¼" ☐ Length of Barrel 14", Machine-cut Rifling ☐ Mounting for Webley Telescopic Sight ☐ Light Trigger Pull ☐ Pistol Grip & Corded Forend

*SHOOTING KIT
provides Target Holder, Target Cards, Tin of Pellets, Pack of Darts, Webley Oil Bottle

Webley know about guns–ask your Dad!

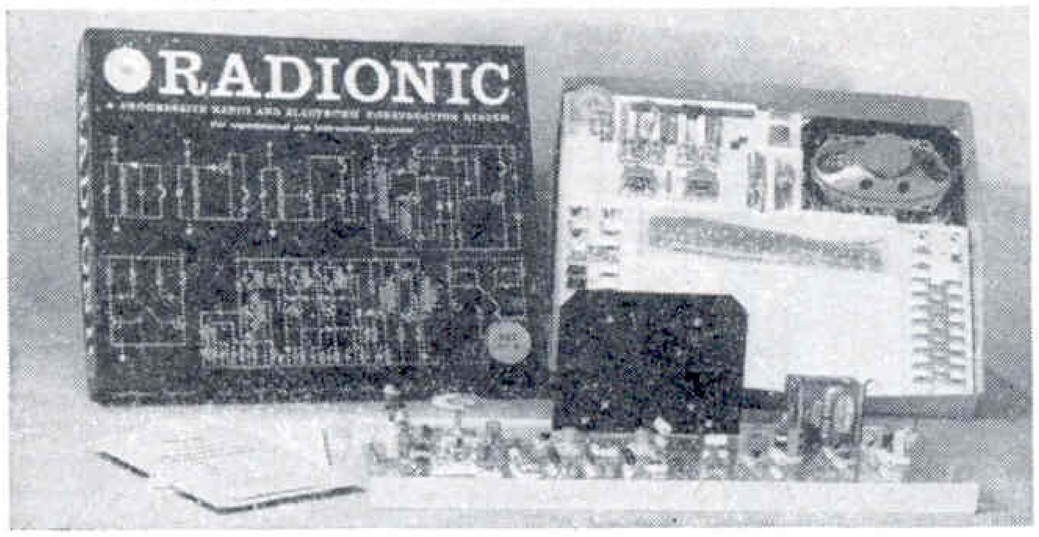
FREE Illustrated literature of modern air rifles, air pistols and accessories is available from:
(enclose 4d. stamp for postage)

Webley & Scott Ltd

24 PARK LANE · BIRMINGHAM 21

RADIONIC

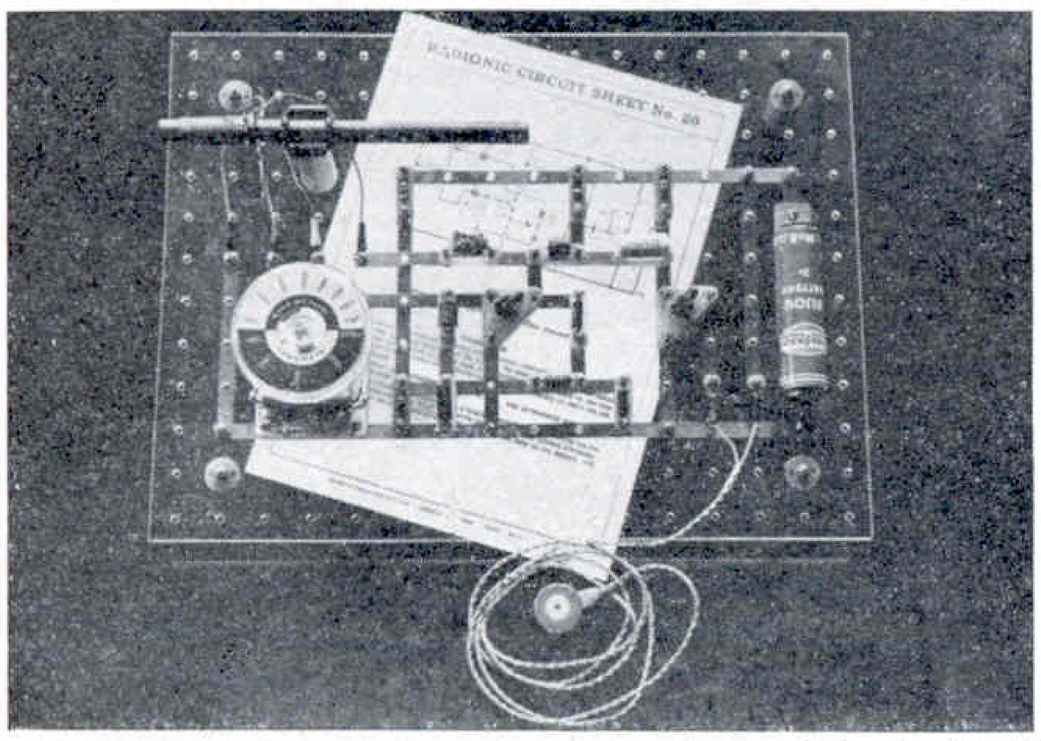
THE UNIQUE AND BRILLIANTLY SIMPLE RADIO AND ELECTRONIC CONSTRUCTION SYSTEM



A No. 4 Set and Six Transistor Superhet

THIS IS IT!

You can build all sorts of radio and electronic circuits with Radionic. It is easy, and our Technical Department guarantees **your** success. Enthusiasts range from 9 to 82 years of age. The free Radionic News Letter service tells you how to operate any of the Sets on the Short Waves and the new "E" Series of basic Electronic circuits helps you to build electronic organs, binary counters, multivibrators, multimeters, etc.
The quality is high, which is why hundreds of educational establishments—Universities, Schools, Technical Colleges, the Armed Forces—already use Radionic for instruction. Radionic has been selected for display in all the British Design Centres and featured in many Sound and Television broadcasts.



4-stage Reflex (Cir. No. 20)

The system is beautifully engineered from top quality British components. No soldering. No mains. No prior knowledge. Simply arrange components on transparent perforated panel, position brass strip underneath, fix with 6BA nuts and circuit works with full efficiency. You can dismantle and build another circuit. All parts can be bought separately, to expand or convert your Set.

BRAND NEW! Our unique "no-soldering" printed circuit board for portable superhet. Simply drop in your Radionic components, bolt up, and away it goes!

Our "E" Series of basic electronic circuits is available separately.

No. 1 Set £5 - 18 - 6d. 14 Circuits (Earphone)
No. 2 Set £6 - 19 - 6d. 20 Circuits (Earphone)
No. 3 Set £10 - 19 - 6d. 22 Circuits (7"×4" Loudspeaker output)
No. 4 Set £14 - 19 - 6d. 26 Circuits (include 6 Transistor and reflex superhets)

Prices (Post Free)

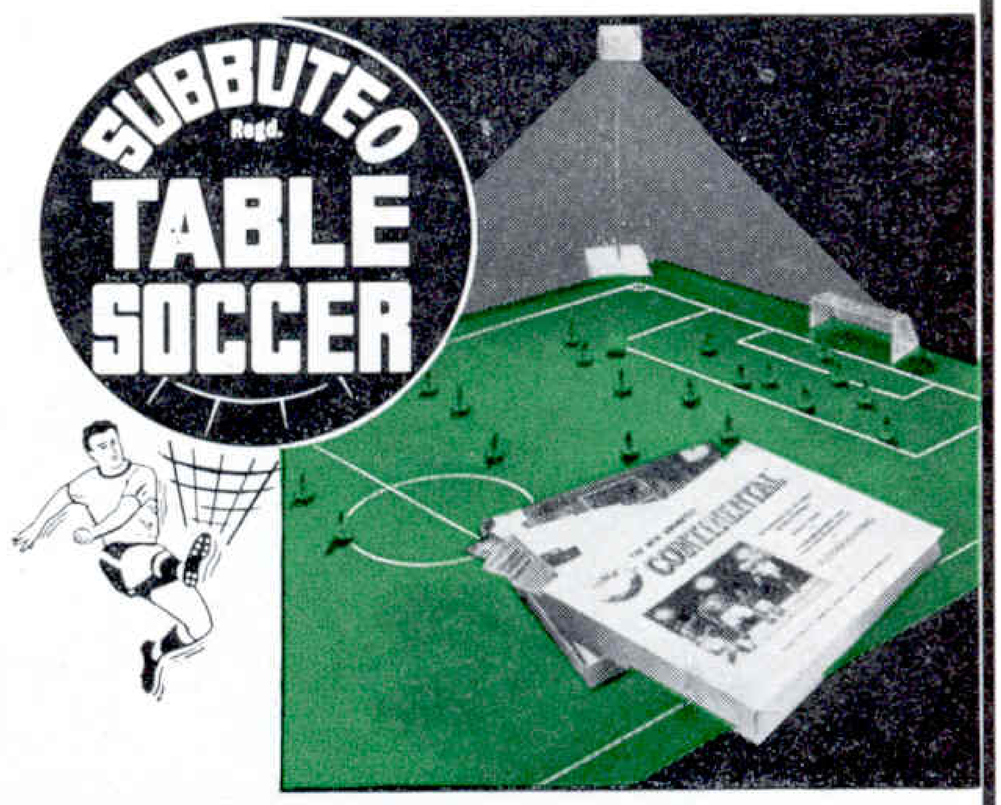
Full details from :

RADIONIC PRODUCTS LIMITED
STEPHENSON WAY, THREE BRIDGES
CRAWLEY, SUSSEX

Tel: CRAWLEY 28700 Trade Enquiries Invited

The Replica of Association Football

PATENTS GRANTED



Here is a game where victory or defeat depends upon the skill of the player with fingertip control. COMPLETE with goals, balls etc, and teams available in all League Club colours. Played with 22 miniature men. All the thrills of real League, Cup and International Football: dribbling, corner and penalty kicks, offside, goal saves etc.

PRICES 10/6, 19/11, 49/6

NEW SUBBUTEO CONTINENTAL

editions with 00 Scale Teams, hand-painted in all League colours, on duotone coloured bases, etc.

FLOODLIGHTING 89/6

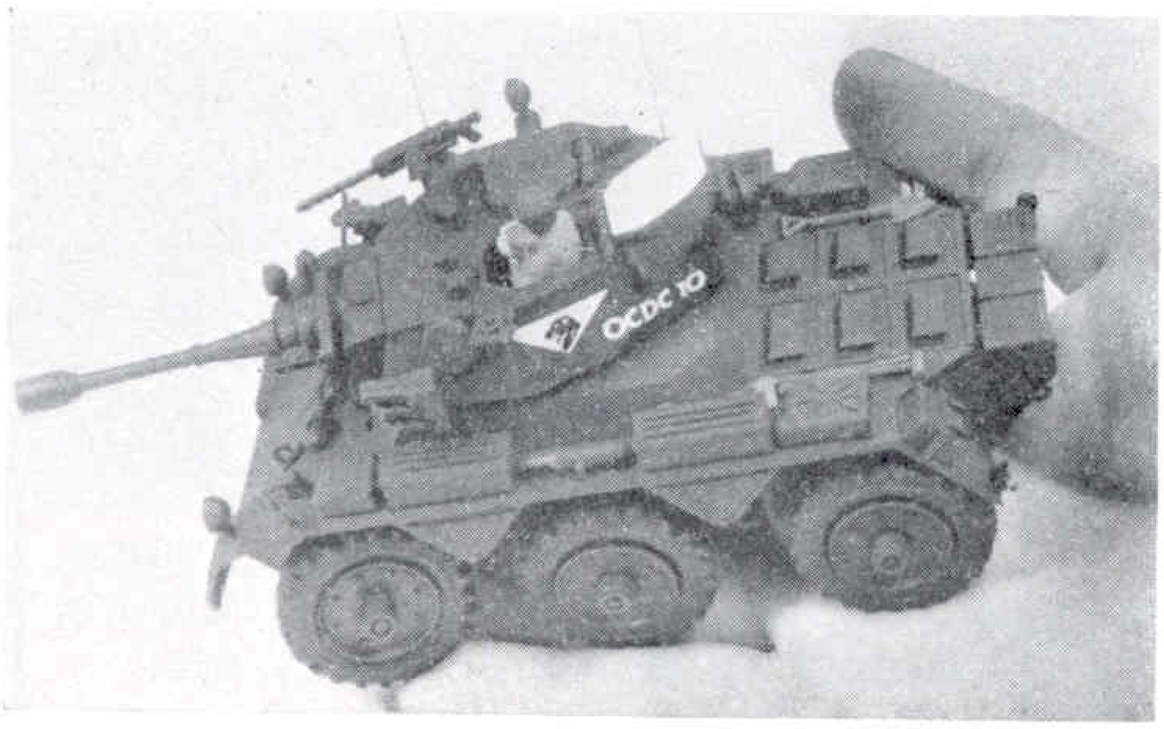
CLUB 59/6 DISPLAY 28/6

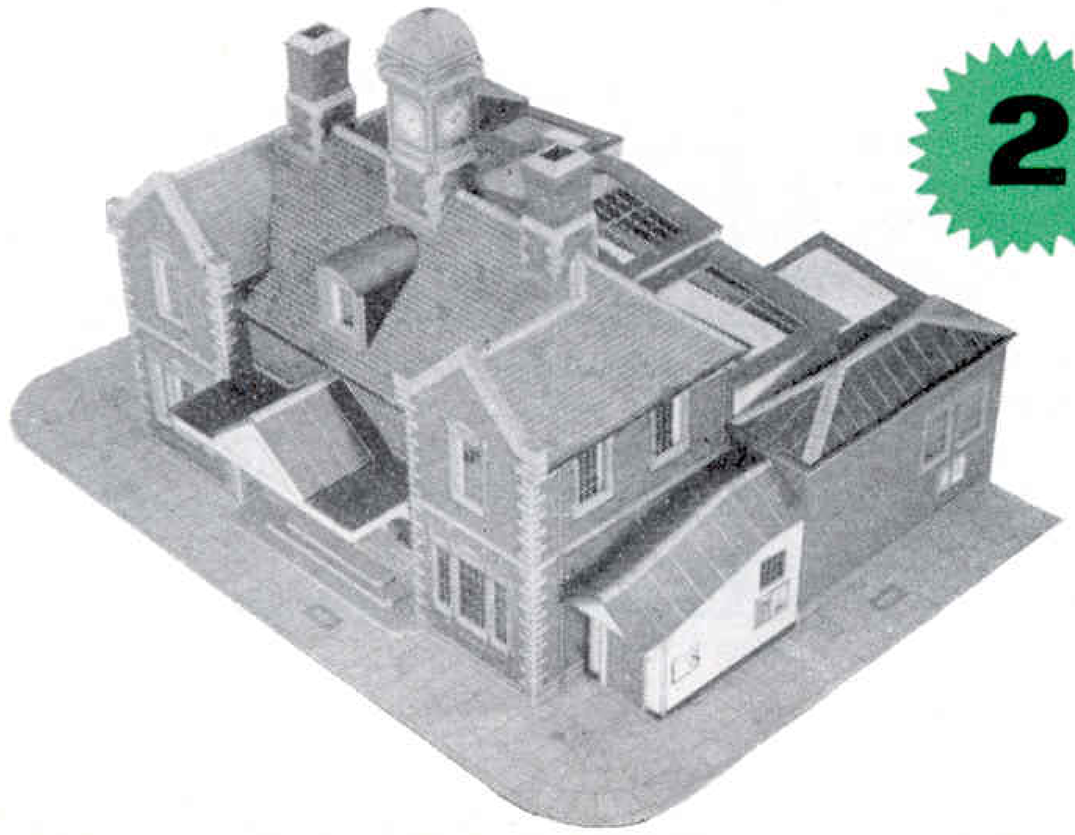
Please ask at your local Sports or Toyshop or Department Store. In case of difficulty write for literature and list of stockists to

SUBBUTEO (DEPT. 5) Langton Green Tunbridge Wells, Kent

have you seen?

1





2

1 Star plastic kit this month is undoubtedly the beautiful 1/35th scale 'Saladin' armoured car in our top picture. It bristles with unusual features—opening hatches and shutters, traversing turret, elevating guns, rubber tyres and it's motorised too! But the really unique thing about this model is its ready assembled all-metal gearbox. This, besides gearing down the motor drive to the rear wheels, is also linked to the steering in such a way that the model automatically steers itself along a pre-programmed course in a most fascinating and realistic manner. The course is roughly a big 'figure 8' but each 'loop' is travelled twice before the model gradually straightens up and proceeds to the opposite loop at about a scale 50 m.p.h.! You can disconnect this device very easily and there's a reversing switch as well. Hint! When you assemble the switch gear—insert the centre bolt with the nut spring UNDER the contact plate—not above as shown in the instruction sheet, otherwise the superstructure does not fit properly. As a further refinement, we replaced the plastic 'whip aerials' with wire ones. Heat the wire, press it into the plastic and it will be firmly fixed.
This kit is from the Japanese TAMIYA range and is imported by B.M.W. Models, of 329 Haydons Road, Wimbledon, London, S.W.19, who are expecting a further supply in early January (the first batch sold out almost instantly) so reserve *your* Saladin now! Reference to this page will identify the kit which costs only 13s. 6d. (plus postage) complete with motor!

2 **Masterpiece in Card** The latest OO/HO QUICKBUILD subject is the best one yet! A magnificent station building which can be assembled either as a terminal (see photo) or as a 'through' station. It is difficult to believe that one could produce such a realistic and 'chunky' looking model from cardboard—even the high quality pre-coloured, die-cut Quickbuild cardboard. An ideal project for the long evenings ahead! The Railway Terminus costs **9s. 6d.** from your dealer.

3 **Any old Irons!** Something new in electric soldering irons (or more correctly soldering guns) is shown in photo 3. It looks heavy, and clumsy but in fact it is neither, and will execute the most delicate jobs as well as heavy ones. This is no ordinary gun, for it does not get hot until the trigger is pressed, after which the bit reaches soldering temperature in just four seconds! No more waiting for the iron to heat up, and when you've finished a soldering operation you can safely put the gun down anywhere because it cools almost as quickly as it heats. We've junked our old irons! The gun illustrated costs **£2 17s. 6s.**, or in its fitted case complete with useful accessories, spare kits etc., **£3 12s. 6d.**

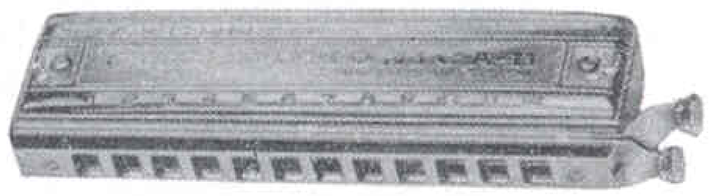
4 **Pea Shooter** Latest Wen Mac ready-to-fly control liner is the highly colourful Boeing P26A (nick named the pea shooter).
The proportions of the original aeroplane are ideal for modelling, and very little distortion has been necessary to produce a first class flyer—price complete **£6 15s. 10d.**

5 **Music Maker** Hohner designers and craftsmen have produced a revolutionary Harmonica with built-in chords—the Chordomonica. With this instrument it is impossible to produce discords because, when a group of notes is blown or drawn, the upper note automatically carries the melody, while the others produce the chord in harmony. Shifting chords is made possible by means of a slide lever. There are two types: the Chordomonica I has 10 holes, 40 reeds and one slide lever. The 12 hole Chordomonica has 48 reeds and an additional slide lever, and both make available chords never before playable on any one harmonica. Both models will be available in the keys of C, A, G, F and E. The price of Chordomonica I complete with special chamois leather pouch is **£2 10s. 0d.**, Chordomonica II **£3 6s. 0d.**

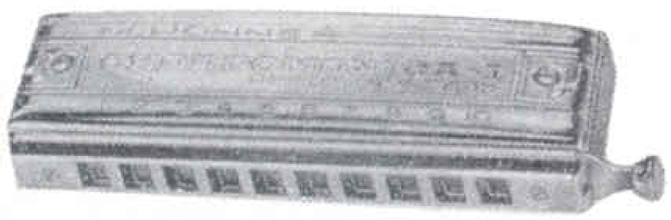
have you seen?

3

4



5

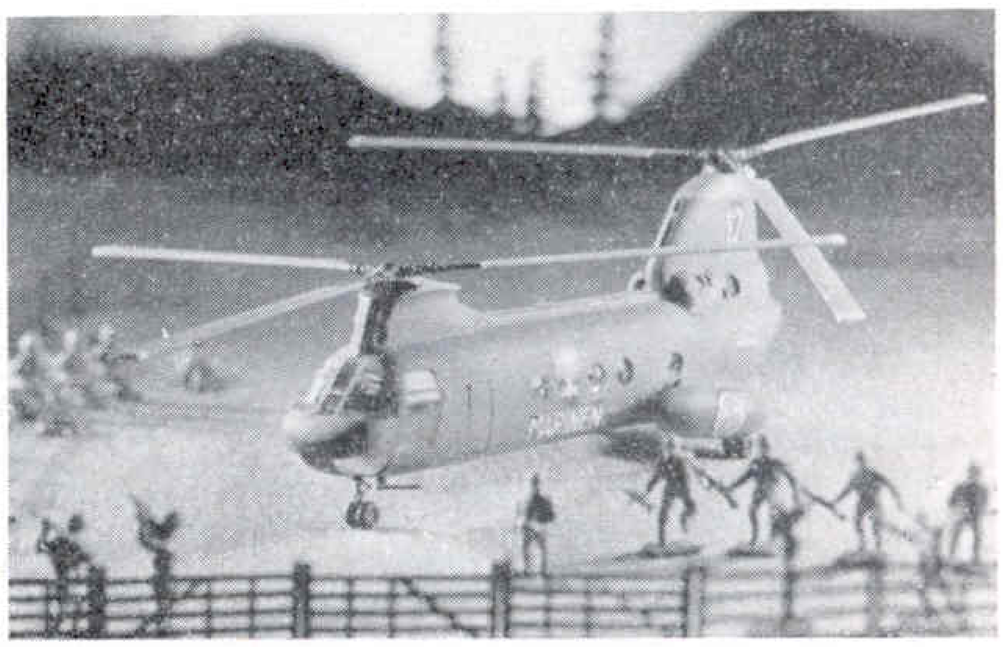


6 Swede Chopper Off-beat subject for the latest Airfix 1/72nd kit is the interesting Boeing/Vertol twin jet 107-11. Swedish naval transfers are supplied, to dress up this unusual model which is beautifully moulded in semi matt dark green plastic. There are 60 parts in this three-shilling kit; and, lots of colourful schemes can be supplied to this widely used aircraft.

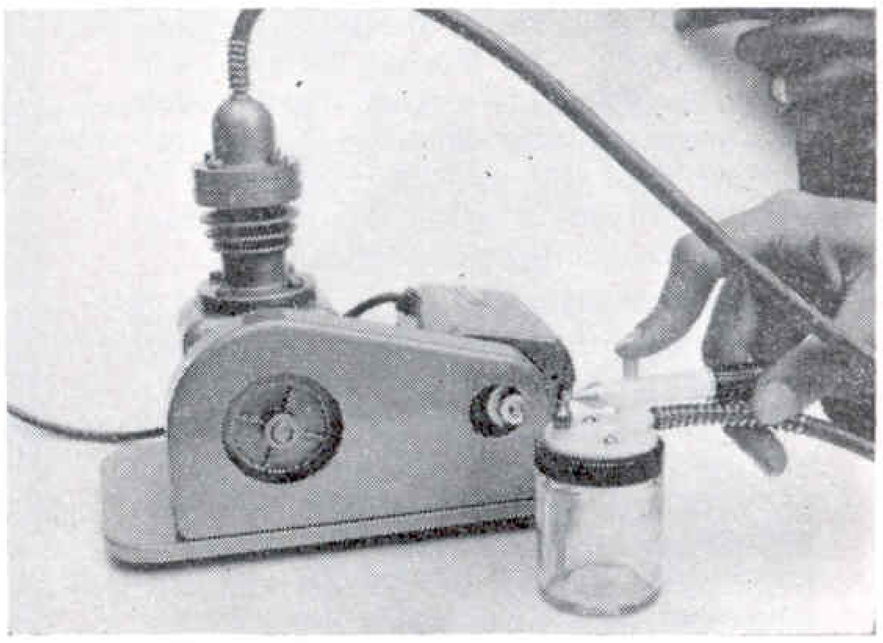
7 A 'Professional' Paint Job Yes, anyone can obtain a really 'professional' finish on their models with a 'MAXISPRAY' plant, specially designed for this class of work. The 'Maxispray' consists of a special 30 to 40 p.s.i. compressor driven by a powerful electric motor (plug in to normal mains electricity), plus a matching air brush (less coarse and with far better control than a normal spray gun). It is capable of spraying any type of model finish perfectly—plus domestic paints, etc., if you want to extend its usefulness.
The complete plant costs **£16 16s. 0d.**—far less than any complete spray outfit with comparable performance. It is a 'must' for every serious model builder. Distributors: Ripmax Models & Accessories. Incidentally, the Editor sprayed his R100 airship with one of these guns—the results can be seen on page 10.

8 New OO Locomotive Kit Manufactured by George E. Mellor, of 31a Rhos Road, Rhos-on-Sea, N. Wales. Price **£3 19s. 6d.** locomotive and tender body kit. The London and North Western Railway, long famous for its distinctive locomotives, is at last represented in OO gauge by the series of kits made under the GEM name. The latest kit to be added to the range in common with the others, is made from white metal, and can be built in two forms, either an L.N.W.R. "Experiment" 4-6-0, or an L.N.W.R. "Prince-of-Wales" 4-6-0. The kit, which is designed to be fitted to a standard Tri-ang B12 chassis, is intended to be glued together with an impact adhesive of the Evo-Stik or Bostik type, although it can also be soldered together with a low melting point solder. Beginners however, are advised to adhere to the former method, which does not involve the use of a soldering iron, and therefore disposes of any risk to the very soft castings. Tender adaptors for Tri-ang, Hornby Dublo, and scale three link couplers are provided, and provision is made for the fitting of scale wheels if desired. Duplicate parts are included in the kit to allow either model to be built.

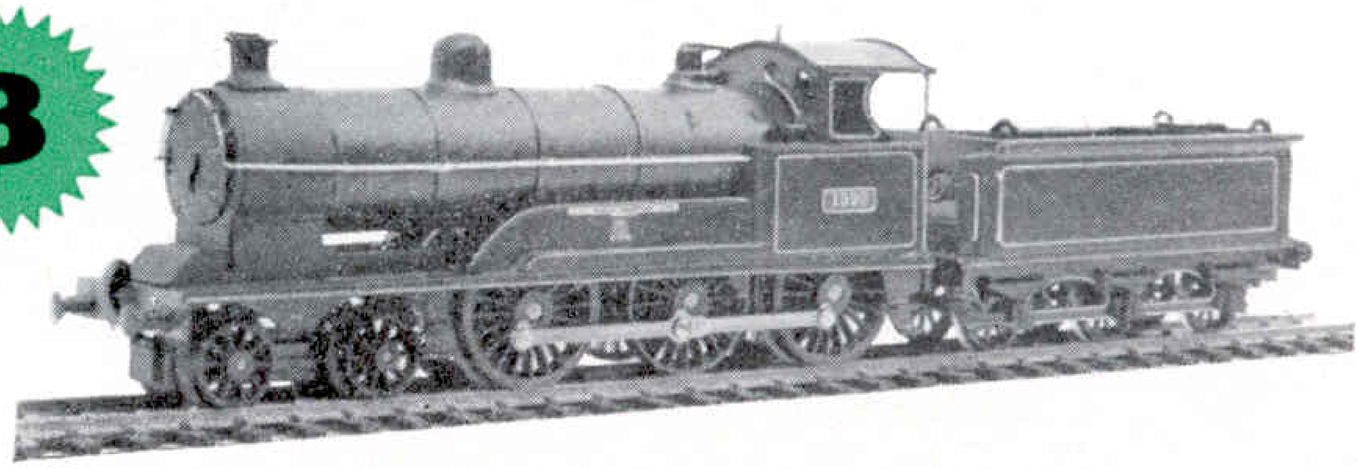
6



7



8



Mike Rickett

These 'Old style' buildings will be at home in any layout

'MM' in Model-Land

MODEL railway enthusiasts are fortunate in having a wide choice of 'buildings' kits readily available, but there have been some 'gaps' in the various kit ranges. Buildings common to cities and large towns would be of great value on most layouts, especially those in a cramped location, where rows of houses and shops adjacent to the station would be expected. The Tri-ang Model-Land kits already include a great many models that are essentially more country village, or town than city, and enthusiasts will be pleased to learn of some recent introductions to this comprehensive range.

Before describing the new additions, I would mention that all Model-Land kits are made in high impact plastic, cleverly designed so that all parts locate easily and simply on to each other, with the minimum of unnecessary and annoying fiddling. The kits are assembled with a polystyrene cement (included), just like any other plastic kit, and much pleasure can be gained in their construction. The highly detailed parts are ready coloured, and it is not therefore *essential* to paint them, although if a large number of the same kit are to be used close together, slight differences in painting will give a more authentic effect, and the extra trouble is well worth while. The kits lend themselves to this sort of treatment, and those enthusiasts interested in 'customising' to suit particular requirements will find the kits wonderful subjects for their art.

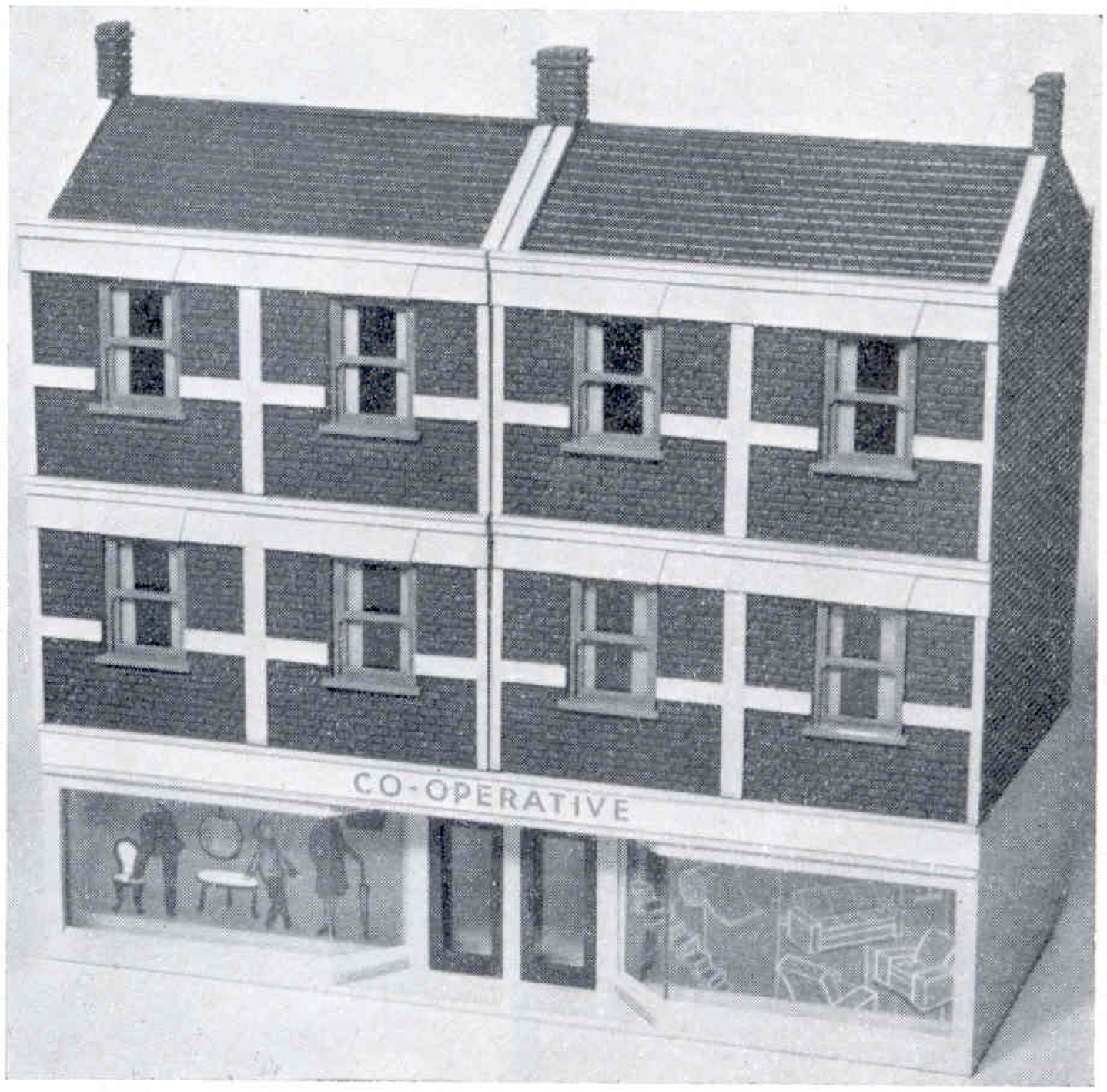
The two new additions are both models that fill gaps in the range now available. The first, a small shop and older style office block, consists of a three-storey red brick building, the ground floor representing a small shop, and the two upper floors, offices. This type of building is a common sight in nearly every town and city, and the models can therefore quite legitimately be used in large numbers almost anywhere.

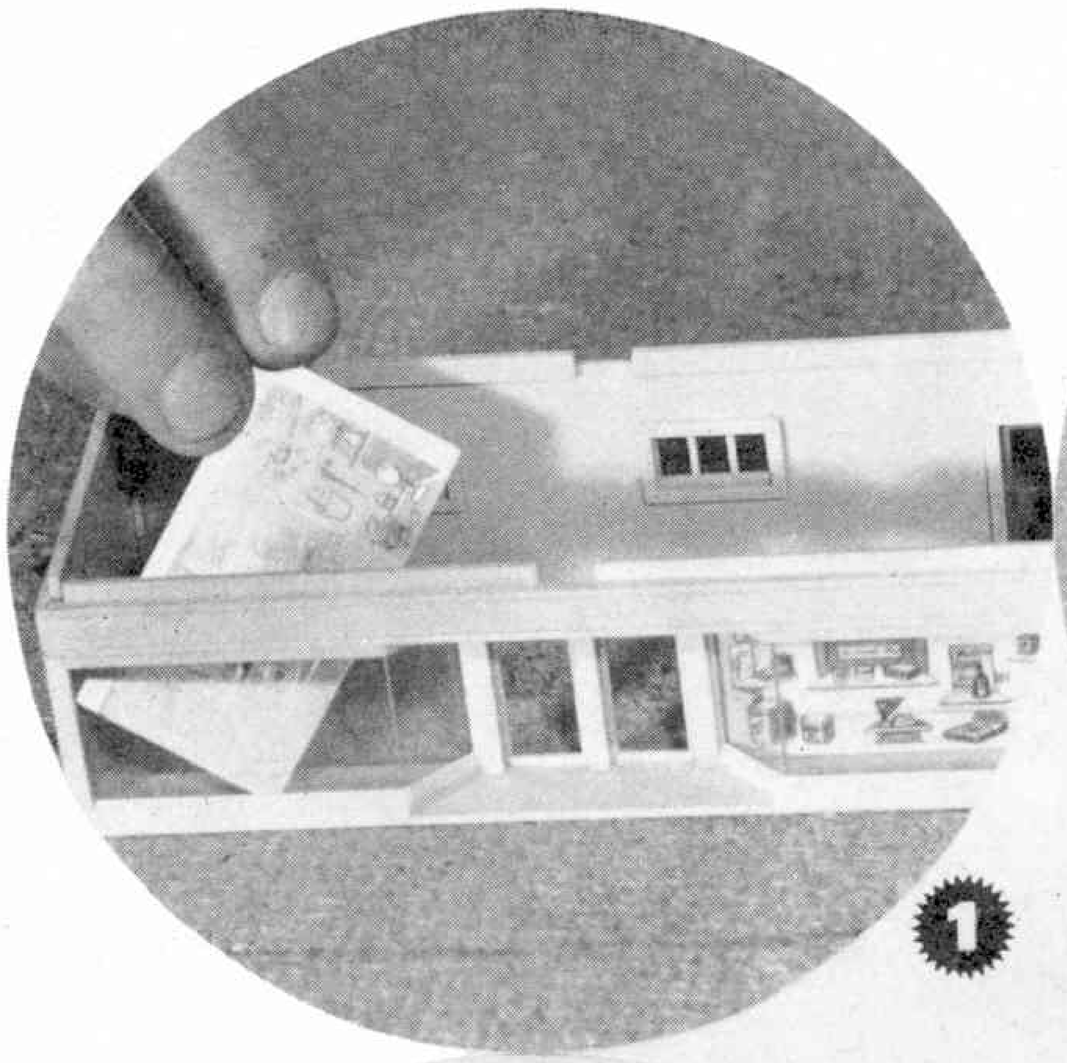
The shop walls round RML 44 represent concrete faced brick, and are off-white in colour. The shop is yellow, and the upper floor window frames green. The second and third storeys are faced with stone sections, one going across the middle of each floor, and one going down the middle. The windows are provided with blue curtains.

The second building RML 45 is a larger version of this and is double the length. As before, the ground floor is occupied by a store, which, incidentally, has a variety of name labels, such as F. W. Woolworth, Boots Dispensing Chemist, and Co-operative! The two upper storeys are similar in appearance to the smaller shop, and the red brickwork is once again provided with stone sections. These two buildings, together with RML 38 Town House, can provide the basic components for a whole town, or for smaller town scenes. A row of three shops would look quite effective especially since such rows of houses are often built by the same firm to a common design specification.

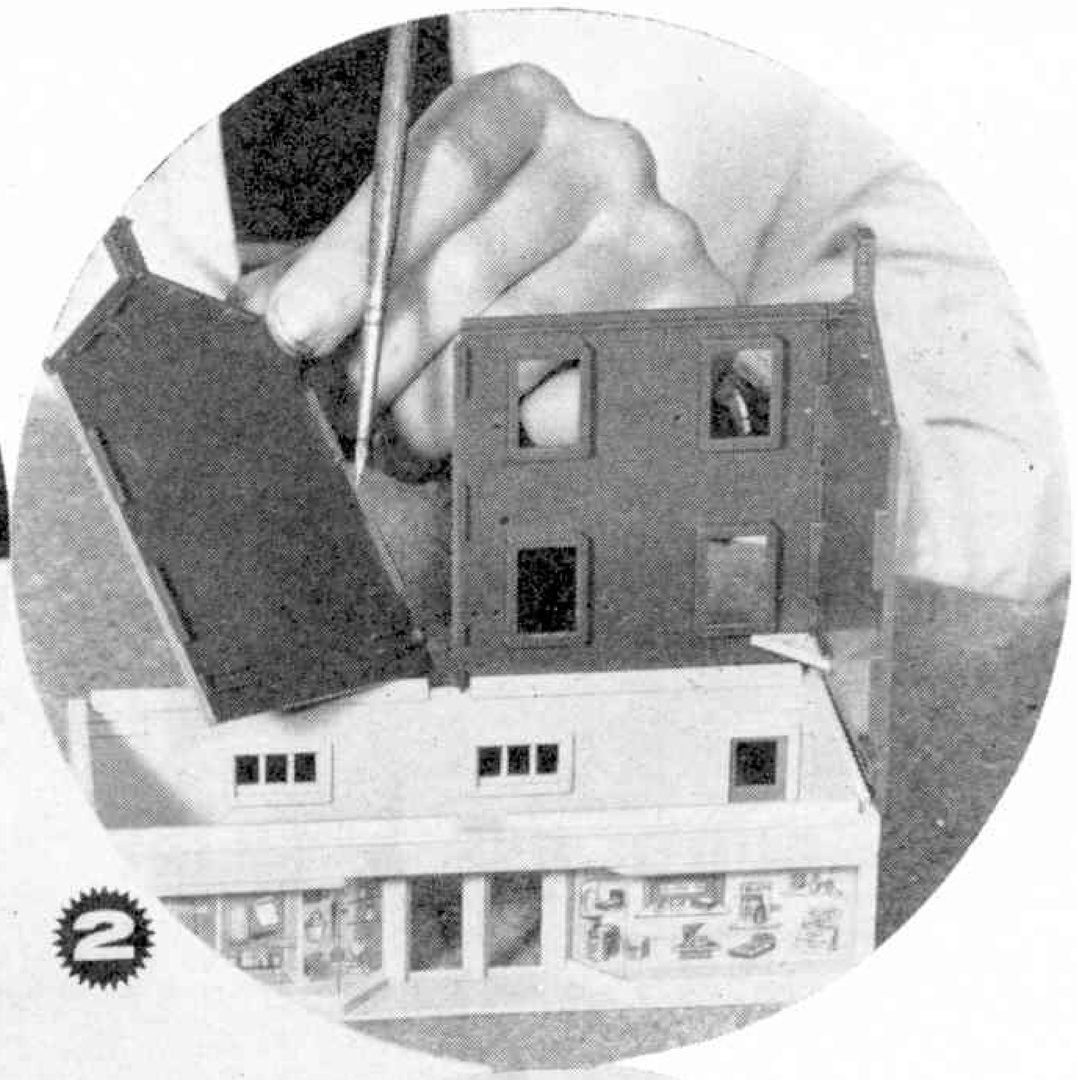
The kits are fascinating to build, especially the larger Store, which has a great many self-coloured pieces. Construction of the RML 45 Medium Shop and Older Style Office Block is started—logically enough—with the ground floor, which consists of a shop front and back, and two pieces for the ends. These four pieces are cemented together to form the basic structure for the building, and two glass fronts are then added behind the bays. The two doors at the front of the shop can, if you wish, be painted a different colour before cementing them into position, and the paper shop backs cut out and glued on their respective sheets of plastic, which is, in turn, positioned behind the shop window. The shop name should also be cut from the paper sheet and stuck over the shop on the name board. A further door has to be added to the rear of the building as well as two windows.

Construction of the two upper storeys can now begin by cementing together one end and side into the lugs provided on





1 *The ground floor of the Medium shop and Office Building being assembled There's a choice of 'windows'*



2 *The upper walls of the office are added on to the tops of the lower walls with the gusset pieces already in position*

3 *Once the glue is dry, the stone coping sections can be placed over the walls in their correct locations*

4 *The Small shop and Office being 'weathered'. The walls have had a coat of paint smeared in with an old cloth*

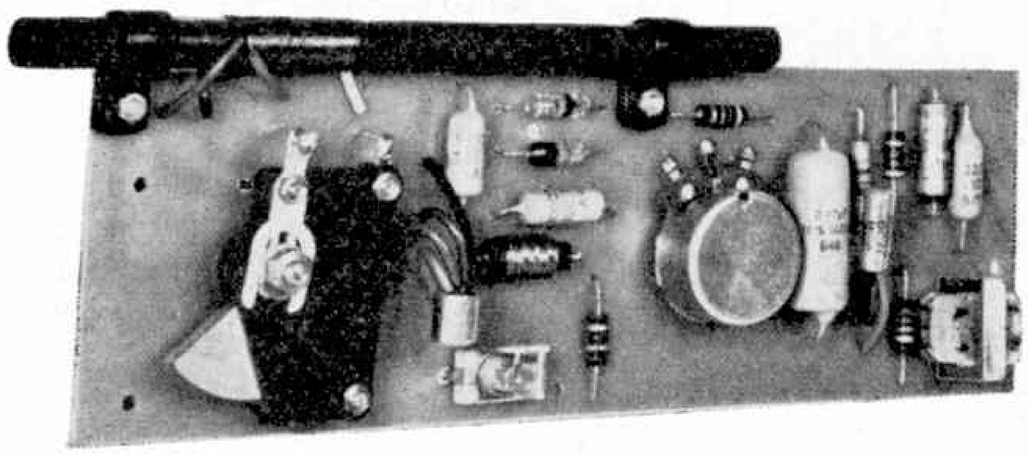
the edge of the lower storey, including a gusset plate in each corner. This is followed by another side, and then two more ends glued back-to-back. The other sides and end can then follow. Four roof pieces are included in the kit and these may now be cemented in position. The sixteen windows are then placed in their frames, but remember to situate the ledges at the bottom. The blue plastic curtains are first placed behind the windows before they are finally cemented into position.

The four roof pieces are located on to the four lugs at the top of the end walls, and once they are firmly in position it is possible to begin adding the exterior detail to the walls and roof of the building. The stone coping pieces can be cemented above the two sets of windows, the lower moulding having two projections which locate in two holes in the brickwork. The upper panels have a piece set at right angles all the way along so that they can be cemented onto the top edge of the wall. The other details that remain to be added are cross-shaped and 'T'-shaped panels. All that then remains to be added are the ridge pieces which fit on the crown of the roof.

It is comparatively easy to ring the changes on these models. If a row of shops are required, all basically identical, but differing in detail, it would be possible to use a number of both RML 45 Medium Shop and Older Style Office Block, and RML 44 Small Shop and Older Style Office Block. Each building can be slightly modified by painting the window frames different colours, and by giving the windows different colour curtains. The brickwork can also be treated to give it an older appearance and I would suggest smearing a little black paint on the bricks with a rag and then smearing a little red paint on to give a mottled or 'weathered' appearance. The concrete or stone section could be painted grey or black, except for the shop part that would probably have a cleaner appearance. Doors can also be painted differently to give variety. Treated in this manner a row of otherwise identical buildings will look most effective.

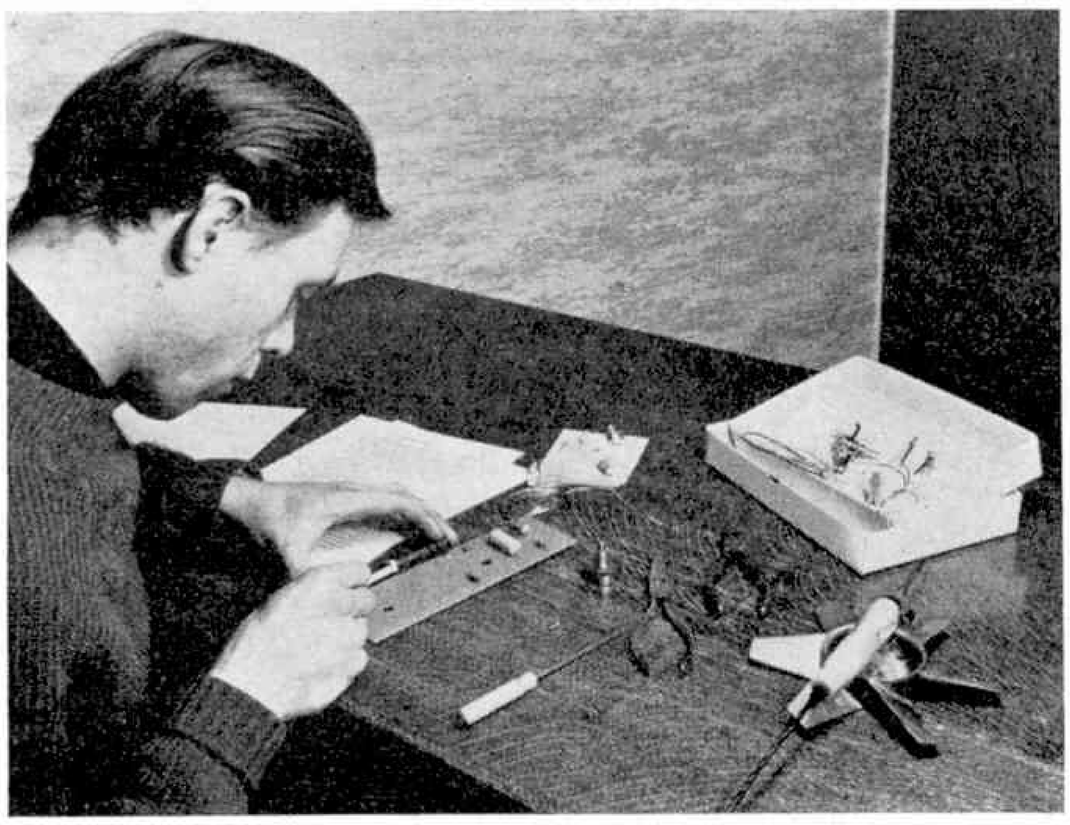
basikits

A DIVISION OF
K. L. B. ELECTRIC LTD.
9 UPPER BERKELEY ST.
LONDON, W.1



LEARN—BUILD—USE & ENJOY

BASIKITS introduce new electronic kit sets which are unique in several ways. After considerable investigation the kits described were designed and perfected as being of greatest interest to beginners. When you buy a **Basikit** you will be provided with all the components necessary to get the unit working. These will be a printed circuit board with all the resistors, capacitors, transistors, etc., required together with wire, nuts and screws, solder and similar hardware.



LEARN AS YOU BUILD

WITH ALL BASIKITS you will receive details in simple language of how the unit you are building functions. These instructions are intended to help those constructors who have a basic knowledge of electronics and describe in non-mathematical language the action of each stage and overall working of the unit. It should be emphasised that it is not necessary to use this part of the instructions in order to assemble and operate the **Basikit** correctly, this description only being an aid to those who wish to learn as much as possible about their project. Even complete beginners will have no difficulty in assembling units from **Basikit** as complete assembly instructions are given including advice on soldering and suggestions for using the finished unit.
The first three **Basikits** that we offer are both complete in themselves and also complementary to each other.

BK 1. 2 TRANSISTOR RADIO ... ... 59/- post free
BK 2. 300 MW AMPLIFIER ... ... 57/6 „ „
BK 3. 9V. POWER UNIT ... ... 42/6 „ „
A full range of tools, soldering irons, earphones and loudspeakers are available.

Send for descriptive literature NOW post free

basikits

A DIVISION OF
K. L. B. ELECTRIC LTD.
9 UPPER BERKELEY ST.
LONDON, W.1

You can do it, too!
WITH A
WEBLEY
AIR PISTOL

Think of it. . . with a Webley you can be bang on the target every time! For Webley make the finest and most accurate air pistols in the world. Just ask your dad . . . he knows Webley's name and fame!

Webley 'PREMIER'
Undoubtedly the world's best. Calibre .177 or .22 hand-cut rifling for great accuracy. Adjustable backsight. Adjustable trigger pull-off. Weight 32 ozs. Total length 8½".
PRICE £10.10.0 (incl. P.T.)

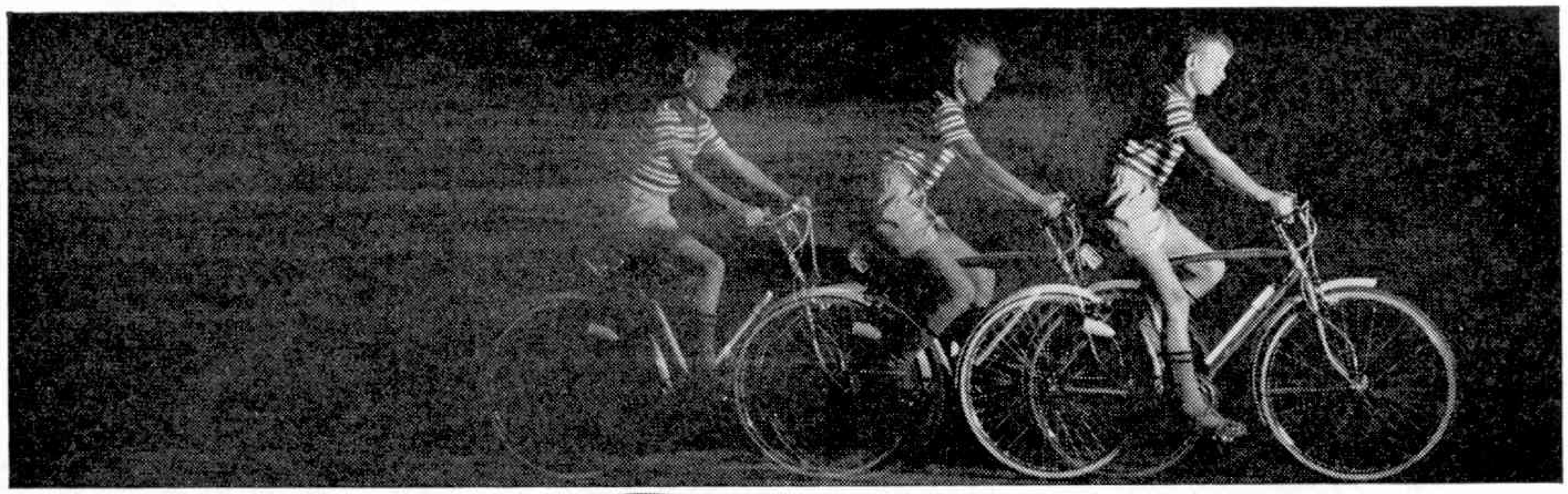
Webley 'JUNIOR'
Capable of grouping within 1 Inch at 30 ft. from a fixed rest! Overall length, 7¾". Weight 24 ozs. Calibre .177. Smooth bore. Rear sight adjustable laterally.
PRICE £7.0.0 (inc. P.T.)

NOTE: Use Webley Pellets to obtain a Webley Marksman Badge!

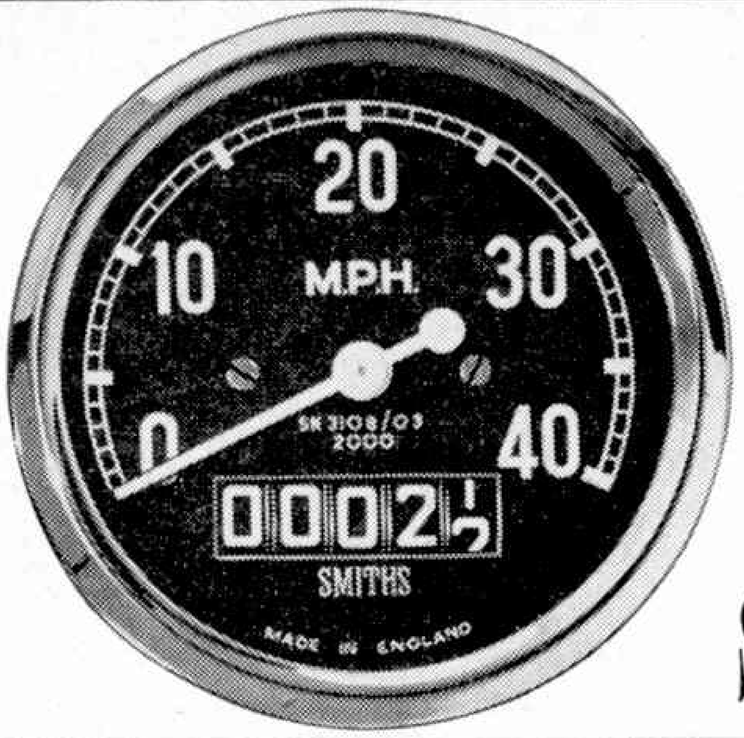
Make sure you ask for a Webley this Xmas

WRITE for Catalogue of modern Air Pistols, Air Guns and accessories (enclose 4d. stamp for postage)

Webley & Scott Ltd
24 Park Lane, Handsworth, Birmingham 21



IT'S THE NEXT BEST THING TO AN ENGINE!



Funny how a speedo makes riding a bike easier and more fun. It's great to know what speed you're doing, and you feel as though you're riding more than just an ordinary bicycle. A SMITHS cycle speedometer tells you your speed accurately up to 40 m.p.h., records the miles you travel too. SMITHS speedos don't cost a lot—you could soon save the 47/6 from your pocket money, or . . . what about a hint to Dad?

Make sure *you* equip your bike with the next best thing to an engine—a SMITHS cycle speedometer from any branch of Halfords and most other good cycle stores.

SMITHS MOTOR ACCESSORY DIVISION
OXGATE LANE, LONDON N.W.2

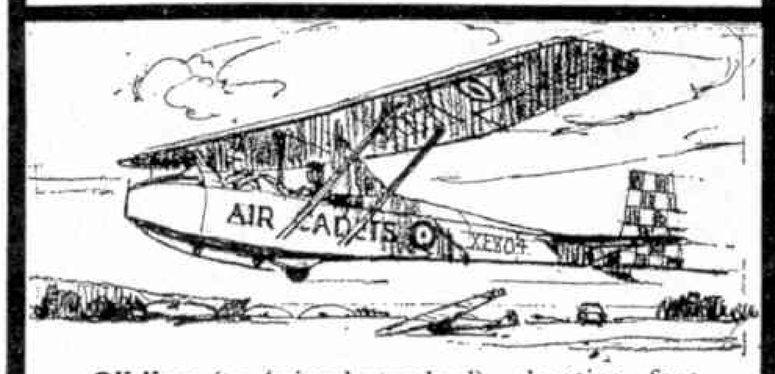
What can you do in the Air Cadets?

For air-minded boys of 13½ to 17¾ here is a hobby with a future...

You learn about flying. This is real, serious training, that can carry you right through to your private pilot's licence.

You learn about radio and radar, the aids to fast, efficient flying, and many other R.A.F. technical subjects.

You can travel. Annual Summer or Easter camps on R.A.F. Stations at home or abroad; and you might go to any of eighteen foreign countries!



Gliding (to 'wings' standard)—shooting, football, swimming, boxing, you name it! There is bags of sport in the Air Cadets.

. . . and you make dozens of the best friends you ever had! When they are old enough, many of them will join the R.A.F. Maybe you could too!

POST COUPON NOW

To Wing Commander E. F. Nind, D.F.C., R.A.F., Headquarters Air Cadets (QP276), Royal Air Force, White Waltham, Berks.

Please send me information about the Air Training Corps and the address of the squadron nearest to my home.

*Name*_____

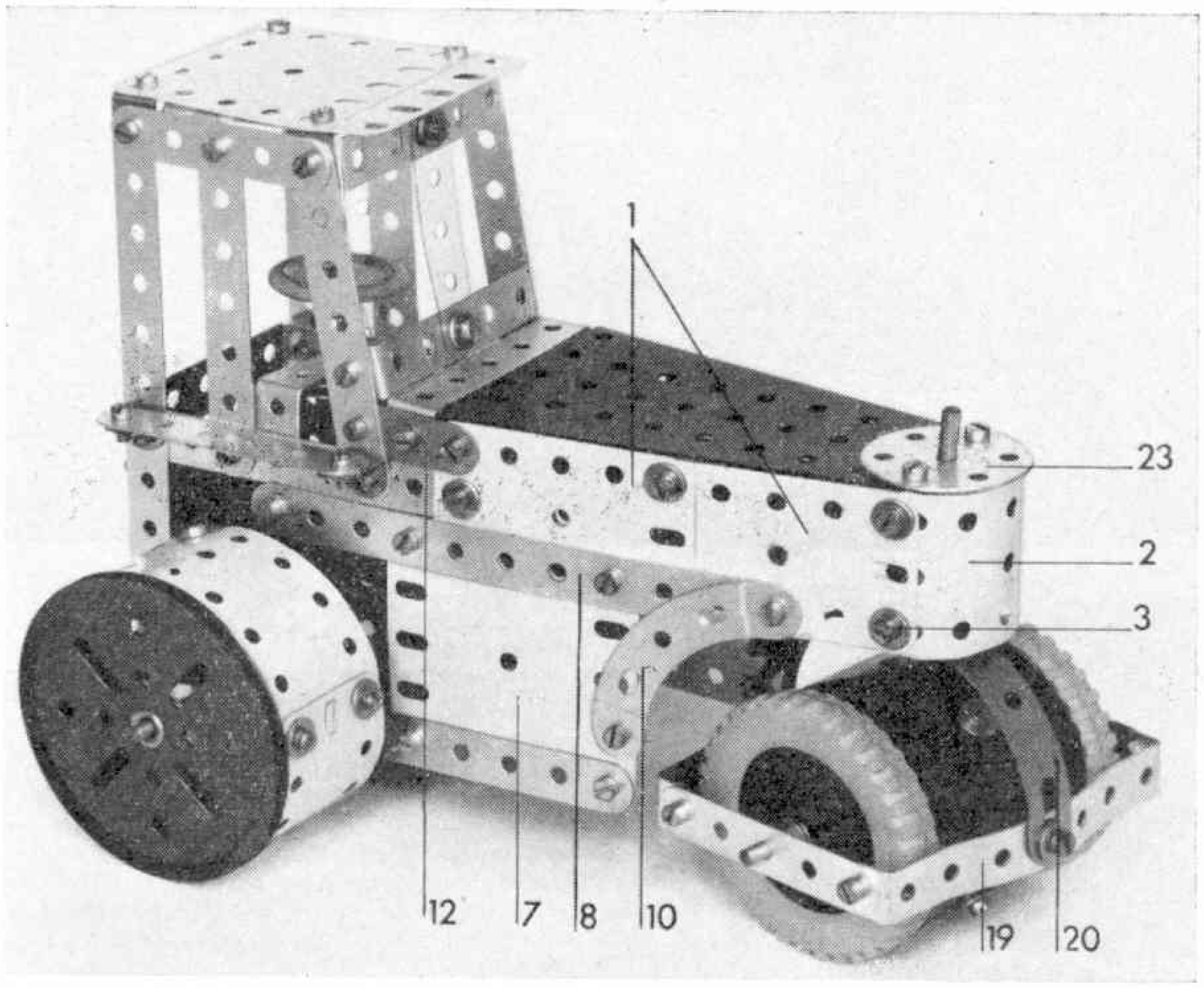
*Address*_____

_____

_____ *Age*_____

Roll your own road

and exercise your ingenuity by devising a motor installation



This realistic-looking model of a Diesel Road Roller can be built with a No. 7 Meccano Outfit

EARLIER in the year Meccano Limited added a model of a diesel road roller to their Dinky Toys range. I understand that this has proved tremendously popular with model-*collecting* readers. With this in mind I toyed with the idea that a Meccano version might well turn out to be equally as popular with model-*building* readers—this page shows the results.

Outfit No. 7 contains all the parts necessary to complete the model, which incorporates an unusual, but amazingly effective steering system. Although our original model did not contain a Motor it would be a comparatively easy matter to fit one, such as the Emebo Motor or the new Power Drive Unit.

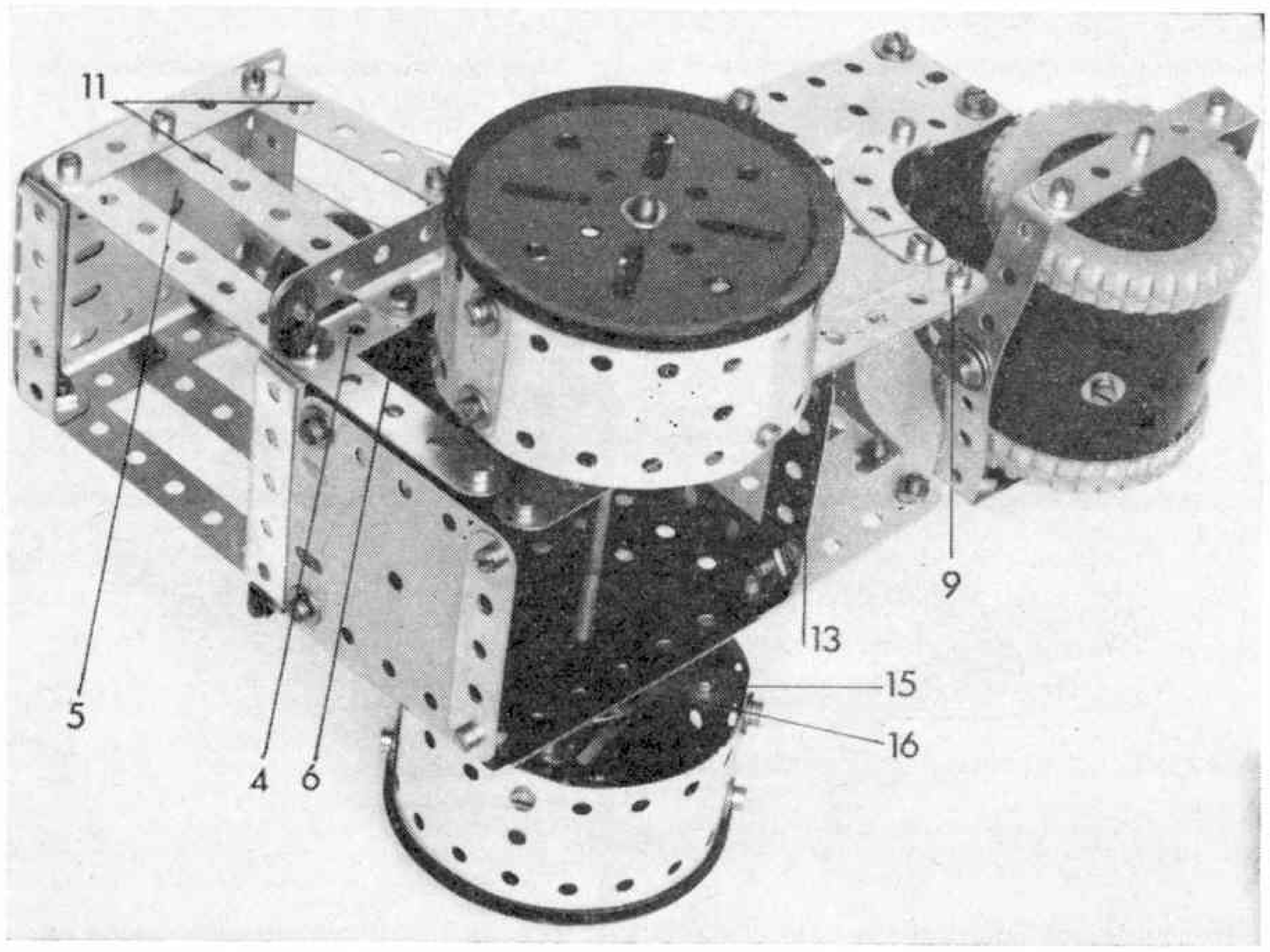
Body and Cab

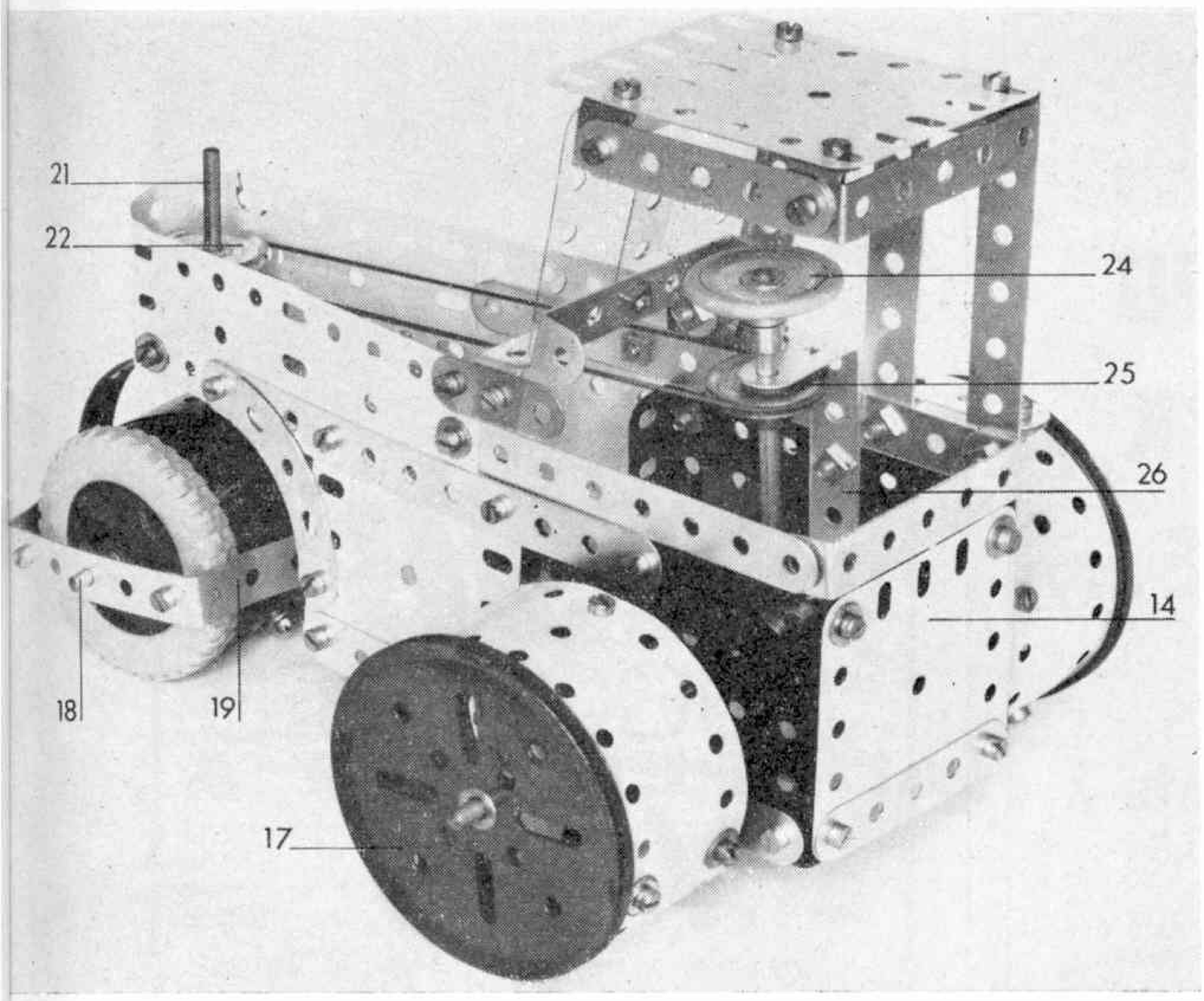
Two $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in. Flexible Plates 1 are bolted to each flange of a Flanged Sector Plate then another $2\frac{1}{2}$ in. by $1\frac{1}{2}$ in. Flexible Plate 2 is curved to shape, and is bolted between the first Flexible Plates, as shown, at the same time fixing a $1\frac{1}{2}$ in. by $1\frac{1}{2}$ in. Double Angle Strip in place by Bolts 3.

Both sides are now similarly built up. Plates 1 are extended by a $5\frac{1}{2}$ in. Strip 4, to which a second $5\frac{1}{2}$ in. Strip 5 is bolted, at the same time securing an Angle Bracket in place. Fixed to the Strip, in turn, is a $3\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flanged Plate 6, which is also fixed, along with a $2\frac{1}{2}$ in. by $2\frac{1}{2}$ in. Flexible Plate 7 and a $5\frac{1}{2}$ in. Strip 8 to Plates 1. Plates 6 and 7 are overlayed along their lower edges by another $5\frac{1}{2}$ in. Strip 9, while Strip 8 and Plate 7 are joined by a $2\frac{1}{2}$ in. Stepped Curved Strip 10.

Two $3\frac{1}{2}$ in. Strips 11 are bolted to Strip 4, the Bolt holding the foremost Strip also holding an Angle Bracket in position. This Angle Bracket is connected to the Angle Bracket fixed to Strip 5, by a 3 in. Strip, then Strips 5 and 11 are connected at the top by a $2\frac{1}{2}$ in. Strip. A $1\frac{1}{2}$ in. Strip 12 is bolted between the foremost Strip 11 and rearmost Plate 2.

An underneath view of the Road Roller showing construction of the rear rollers





In this view, the top of the model and part of the cab have been removed to help description

Both sides of the model are joined by five 2½ in. by 1½ in. Double Angle Strips, a 2½ in. Strip 13, and a 2½ in. by 2½ in. Flexible Plate 14 overlayed by a 2½ in. Strip. The positions of the Double Angle Strips can be clearly seen in the accompanying illustrations. Two 2½ in. by 1½ in. Transparent Plastic Plates represent the windscreen while the cab roof is formed from two 2½ in. by 2½ in. Flexible Plates fixed to the sides by Angle Brackets.

The Rollers

Each rear roller is built up from two 5½ in. by 1½ in. Flexible Plates connected to an 8-hole Bush Wheel by four Angle Brackets 15, extended by Fishplates 16. The Bush Wheel is mounted on a 3½ in. Rod, as also is a 3 in. Pulley 17, which serves as the outside 'hub' of the roller. The Rods are mounted in Flanged Plates 6, and are joined by a Rod Connector to form one complete axle.

To build up the front roller, two 5½ in. by 1½ in. and two 2½ in. by 1½ in. Plastic Plates are bolted together, to give a cylinder with a 2½ in. face. This cylinder is then clamped between two 2½ in. Road Wheels, loose on a 4 in. Rod 18, but held in place by Collars with two Washers between each Collar and Road Wheel.

The completed roller is mounted in a framework obtained from two shaped 3½ in. by ½ in. Double Angle Strips 19, connected by two 2½ in. Strips. A Formed Slotted Strip 20 is bolted to each Double Angle Strip 19 and, at the top, these are secured to a Coupling by Bolts through the end transverse tapped bores of the Coupling:

Fixed in the centre transverse smooth bore of the Coupling is a 2 in. Rod 21. A Collar is mounted on the Rod, against the Coupling, then the Rod is passed through the centre hole of the 1½ in. by ½ in. Double Angle Strip held by Bolts 3. A 1 in. Pulley with boss 22, is next fixed on the Rod which is then journalled in a 6-hole Wheel Disc 23 bolted to the Flanged Sector Plate.

Steering System

A 3½ in. Rod carrying a 1 in. fixed Pulley with Rubber Ring 24, a Collar and another 1 in. fixed Pulley 25, is journalled in the lugs of a 2½ in. by 1½ in. Double Angle Strip 26. Pulley 26 is then connected to Pulley 22 by a 6 in. Driving **Band.**

Spanner

Parts required

8 of No. 2	1 of No. 24c	2 of No. 90a
4 of No. 3	102 of No. 37a	1 of No. 155
2 of No. 4	104 of No. 37b	1 of No.186a
6 of No. 5	31 of No. 38	2 of No. 187
2 of No. 6a	1 of No. 46	5 of No. 188
8 of No. 10	1 of No. 48	4 of No. 189
16 of No. 12	5 of No. 48a	5 of No. 190
1 of No. 15b	2 of No. 48b	2 of No. 193
3 of No. 16	2 of No. 53	2 of No. 194
1 of No. 17	1 of No. 54	2 of No. 194d
2 of No. 19b	6 of No. 59	1 of No. 213
3 of No. 22	1 of No. 63	2 of No. 215
2 of No. 24		

Solutions to Puzzles on Page 33

Soccer Teams: Arsenal, Wolverhampton, Brighton, Sunderland and Liverpool.
Sand Problem: There could not be any sand in a hole! Were you caught?
Letter Jugglery: Ash, Elm, Bay, Fir, May, Yew, Oak, Fig.
Good Recipe: Encouragement.

Quick Quiz

1. Dachshund: Germany. 2, Greece. 3, 142 feet. 4, Carpenter. 5, England.
Score: Over 25, Excellent.
Over 20, Good.

Crossword puzzle

A	E	R	O	D	R	O	M	E	■	H	U	B
■	N	■	■	R	A	C	E	■	■	A	■	A
A	R	E	A	■	I	■	N	O	R	M	A	L
S	I	G	N	A	L	■	D	■	■	M	A	C
S	C	O	T	■	W	O	■	A	C	E	■	O
■	H	■	■	■	A	■	F	L	O	R	I	N
■	■	P	L	A	Y	■	L	S	D	■	■	Y
■	P	I	E	R	■	G	O	O	F	■	I	■
■	■	L	A	S	S	O	■	■	I	O	T	A
S	T	O	N	E	■	B	L	I	S	T	E	R
P	O	T	■	N	O	L	A	■	H	A	M	E
U	■	■	M	A	N	I	L	A	■	G	■	N
R	U	R	A	L	■	N	A	N	■	O	■	A

Make it in Metal from page 21

for this purpose use a thin coat of the final colour you intend using, or alternatively a coat of white or yellow. This should be applied very thinly and carefully with a good brush, stroking in one direction only with the minimum of paint on the brush at any one time. Make sure that it does not obscure any of the detail on the engine. Most of the N7 locomotives were to be found in a plain black livery in L.N.E.R. days, although a small number may have remained in Great Eastern Blue for a short while after the grouping in 1923. The second coat of paint should also be done carefully, the brush stroke travelling across the cab roof, round the boiler and longitudinally down the side tanks and footplate. Do only a little at any one time and make sure that the paint brush is perfectly clean. The first coat of paint will not cover the locomotive adequately, as inded it is not intended to, and you will need, if it is done properly at least three separate coats, each coat being allowed to dry *completely*, and then carefully rubbed down with No. 400 wet-or-dry paper before the next coat is applied.

L.N.E.R. or B.R. Transfers for the locomotive are available separately from both Letraset and Hamblings. The former produce 'dry' transfers that are extremely simple to apply, and the latter produce the traditional varnish transfers. These need to have the thick backing paper removed, and varnish painted over the letters, which are then carefully placed into position. When dry the thin backing paper is dampened and removed.

IF YOU ASK ME...

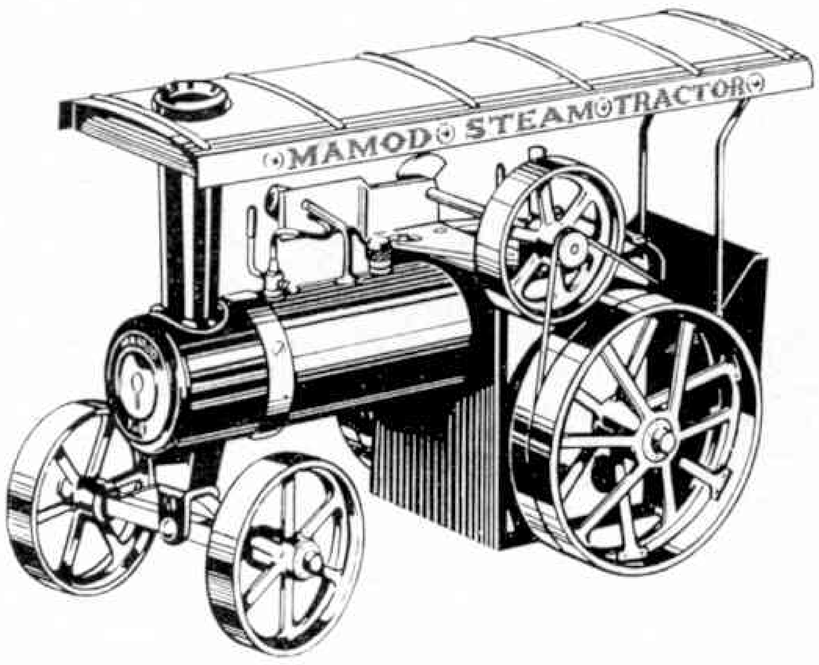
ALL BOYS OUGHT TO HAVE A MAMOD FOR CHRISTMAS!

The lad's right. Mamod Steam Models are great fun. They can drive other working models and the Steam Roller and Traction Engine also run under their own steam. Fascinating.

Mamod means beautifully constructed—and absolutely safe.

Great value all.

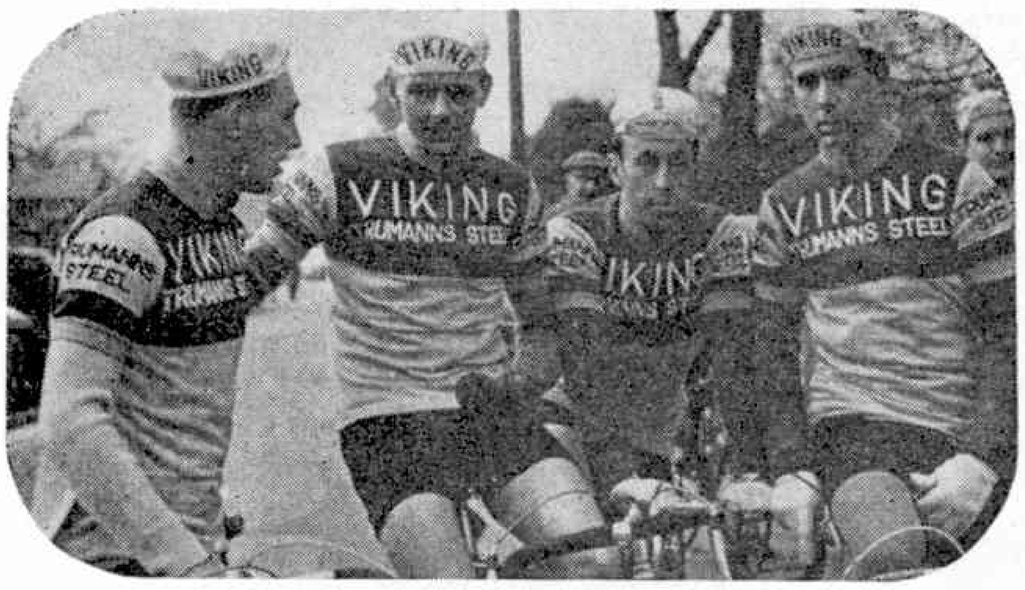
Stationary Engines 32/6 to 99/6. Steam Roller 92/6. Traction Engine 105/-. *See them at leading Toy and Sports shops.*



Mamod

STEAM MODELS

Manufactured by MALINS (ENGINEERS) LTD
Thorns Road, Quarry Bank, Brierley Hill, Staffs.



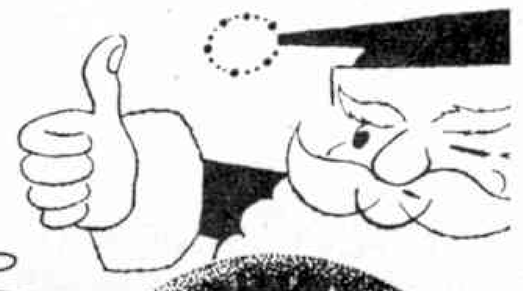
your 1966 SUCCESSES DEPEND ON A Viking

Britain's most successful cycle for Racing or Touring

Send now for New Illustrated Catalogue

Viking Cycles Ltd. (MM.) Russell St. Wolverhampton.

Just the gift FOR DAD



ROMAC REGD

Your dad would love a 1966 styled Romac Steering Wheel Glove–the perfect gift that costs from only 10/6. Over 135 colour variations and sizes. Also lace-on Leather in black, and tan at 32/6. From every Halfords store and other leading accessory shops.

subscribe **now** to

meccano magazine

practical boy's hobbies magazine

Subscription rates—20s. per year. U.S.A. and Canada $3.00 payable in advance.

name.....

address .....

.....

Please post this coupon with your remittance for one year to *meccano magazine* circulation department, St. Alphage House, Fore Street. London E.C.2

CYCLE CARE

LIGHT ON THE SUBJECT

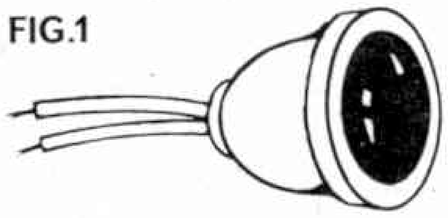
WINTER is on the way and with it the dark evenings. You are going to need efficient lights if you want to travel safely after lighting up time. They are perhaps not quite so important for seeing where you are going as they are for indicating your presence to motorists. You can probably see cars very easily but it is important to remember they probably can't see you—unless you have an efficient set of lights.

You may not have used your lights all the summer and it is unlikely that you will be able to just switch them on one evening and have hundred per cent illumination first time. They will need careful checking *before* you take your first evening ride.

Battery lamps are fine when they are brand new, but they become very temperamental as they get older. A light which flickers on and off is not satisfactory—even if it does always relight when you kick it! Putting in a new battery and bulb is not a surefire cure to all ills, athough the lamp will certainly not work if one or other of these is defective.

It is always useful to be able to test the battery and bulb quickly. The gadget shown in Fig. 1 is ideal for this purpose. All it is, is a bulb holder from a set of Christmas tree lights with two short

FIG.1



lengths of lead attached. Keep this handy at home with a bulb already screwed in. You can test the effectiveness of the battery immediately by touching the bared ends of the wires on to the terminals of the battery to see if the bulb lights. If it does, try the effectiveness of the bulb by taking it out of the lamp and screwing it into the bulb holder. Another quick touch on the battery terminals and you know for certain whether this is the trouble.

In most cases the fault lies with neither battery nor bulb. The most likely culprit is a faulty earth in the lamp case. The circuit is completed as shown in Fig. 2 and rust between the reflector and the case or between the case and the top will make a bad electrical connection and cause a poor or flickering light. The answer is to clean off the rust with a piece of fine emery paper. Make sure the mating surfaces on reflector and case and top and case are bright and clean. Check too that the brass contact strips on the battery are sufficiently sprung to ensure good contact with bulb and with switch. Make sure the little three-pronged bulb

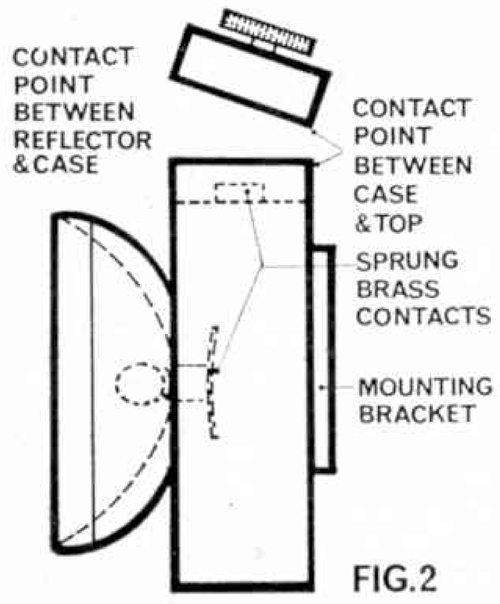


FIG.2

clamp is in position and tight.

It is always as well when you buy a new bulb to check that it is the right rating. For a front lamp you should have a bulb rated at 2·5 volts, 0·2 or 0·3 amps. The rearlamp bulb should be 1·5 volts, 0·15 amps.

Exactly the same points require checking on the rearlamp as the front. The most likely place to find a faulty contact is between the coil spring and the case. Rust might be the trouble again or the spring may have become compressed and distorted. The spring can be pulled out of the case, the metal cleaned. It can then be re-tensioned by stretching it slightly before it is replaced.

A loose or vibrating front lamp seldom works efficiently for very long. A lamp which jumps off will definitely have a short life. There are two ways you can ensure that your lamp stays on its bracket on even the bumpiest of roads. One way is to tighten a small strap around lamp and bracket. An alternative and probably a better method is to fix the lamp with a small nut and bolt. See Fig. 3. Fit the lamp on its bracket, then mark the back of the lamp in line with a hole in the bracket. Drill right the way through the back of the lamp and then fix up with a small nut and bolt.

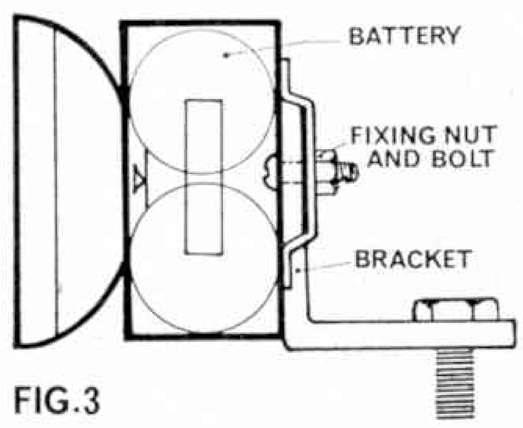


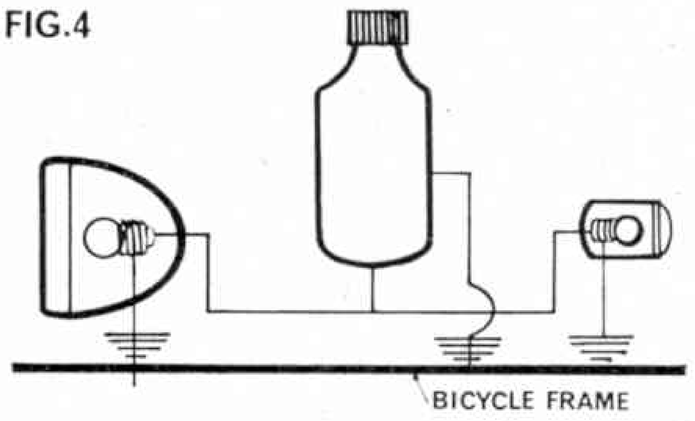
FIG.3

With dynamo lighting, the problem is not so very different. The main problem is once again to ensure that the circuit is completed by having a good earth return. The usual circuit is shown in Fig. 4. Here the earths are shown by arrows (electrical earth symbols). Start with the dynamo unit. This is probably equipped with a sharp pointed grub screw positioned in a threaded hole in the mounting bracket. Screwing this home ensures the tip of the screw bites into the metal of the chain stay and good contact is established. The rear lamp may have a separate mounting bracket or it may be mounted on a special extension of the dynamo mounting. If it is separate, great care must once again be paid to earthing. If it goes on the dynamo bracket it will share the earth already mentioned.

The dynamo headlamp is usually earthed to the frame via its mounting bracket. It is a good idea to clean up the bracket and the bolt which goes into the threaded boss on the front forks before fixing the headlamp.

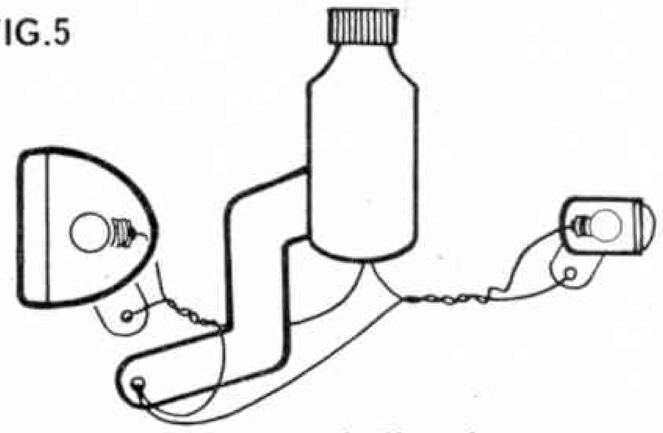
The circuit wiring can be seen in Fig. 4. Wires are taken from the back of the bulb in the headlamp and the rearlamp to the terminal point on the dynamo. The

FIG.4



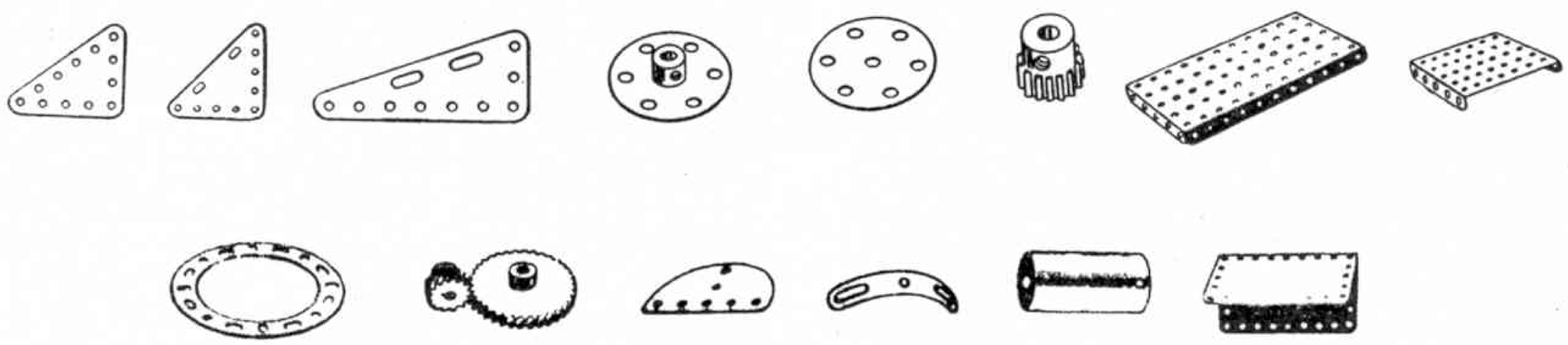
circuit is completed through the frame of the bicycle, via the earthing points. To make an even more foolproof circuit it is an idea to use twin flex. Wire one half of the circuit as shown and use the other wire to complete the circuit instead of the bicycle frame. Fig. 5 should make this clear.

FIG.5



Always carry spare bulbs when you use dynamo lighting. Keep them wrapped in cotton wool in a matchbox or small tin. Follow the recommendations of the maker of the dynamo as regards rating. The bulbs are usually 6 volts, 0·5 or 0·45 amps for the front lamp and 6 volts, 0·04 amps for the rear lamp. Remember, however, that there are other ways of wiring a dynamo lighting set and different bulb ratings are sometimes used. Check the makers' instructions on these points.

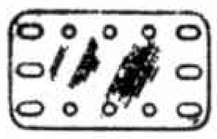
One more very important point if your dynamo is to work efficiently. The dynamo should be mounted so that a straight line drawn through its axis would pass through the hub of the wheel. The spinner should have as much as possible of its serrated edge bearing on the tyre and should be in firm contact with it. Misalignment will often result in tyre wear and an inefficient dynamo.

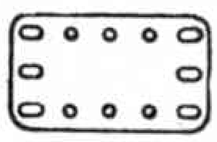


Dealers who specialise in Meccano spare parts

Listed below are some of the dealers who sell Meccano accessories and spare parts. This is intended to aid enthusiasts—and there are many of them—who constantly require additional spare parts for their Sets. All dealers can, of course, order Meccano spare parts for their customers, but those listed here are among our spare part specialists.

C. G. MARSHALL
Maxwell Road
BEACONSFIELD
Telephone: 1092





WILTONS SPORTS AND GAMES
Corner Canal and Queen Street
SALISBURY
Telephone: 2984

TETT'S THE IRONMONGERS
402 Wimborne Road
Winton, **BOURNEMOUTH**
Telephone: Winton 309

JOHN W. BAGNALL LTD.
18 Salter Street
STAFFORD
Telephone: 3420

H. SALANSON & CO. LTD.
83-85 Fairfax Street
BRISTOL 1
Telephone: 2-6185

LUCAS'S (Hobbies) LTD.
7 Tarleton Street
LIVERPOOL 1
Telephone: Royal 7562

LESLIE BROWN
Super Toy and Model Store
95 High Street, Stockton-on-Tees
Telephone: 67616

BARRETT'S LTD.
2 St. George's Street
CANTERBURY
Telephone: 66161

H. A. BLUNT & SONS LTD.
133 The Broadway, Mill Hill
LONDON N.W.7
Telephone: Mill Hill 2877

L. A. RICHARDS LTD.
92 The Broadway
Wimbledon, S.W.19.
Telephone: LIBerty 1155

GORDON EASTON & CO.
40 Lowther Street
CARLISLE
Telephone: 22947

JEREMY
16 Princes Arcade, Piccadilly
LONDON, S.W.1
Telephone: Regent 1846

OVERSEAS DEALERS

AUSTRALIA

Jack Stanbridge's Hobby Shop
54a Canning Highway
Victoria Park, PERTH, W. Aust.
Telephone: 61-1668

R. M. HILL & SONS
36/40 Castle Street
CARLISLE
Telephone 21621 and 21122

F. T. B. LAWSON LTD.
New George Street
City Centre, PLYMOUTH
Telephone: 65363

NORTH SHORE HOBBIES PTY. LTD.
(Mail Order, Parts and Sets)
8 Post Office Street
Pymble (SYDNEY) N.S.W.

W. PAINE & CO. LTD.
168 High Street
CHATHAM, Also at Strood and Grays
Telephone: 45215

Walther & Stevenson Pty. Ltd.
395 George Street
SYDNEY
Telephone: 29 3566

DOLL'S HOSPITAL (YOUNGSTERS)
55 Hallgate
DONCASTER
Telephone: 2831

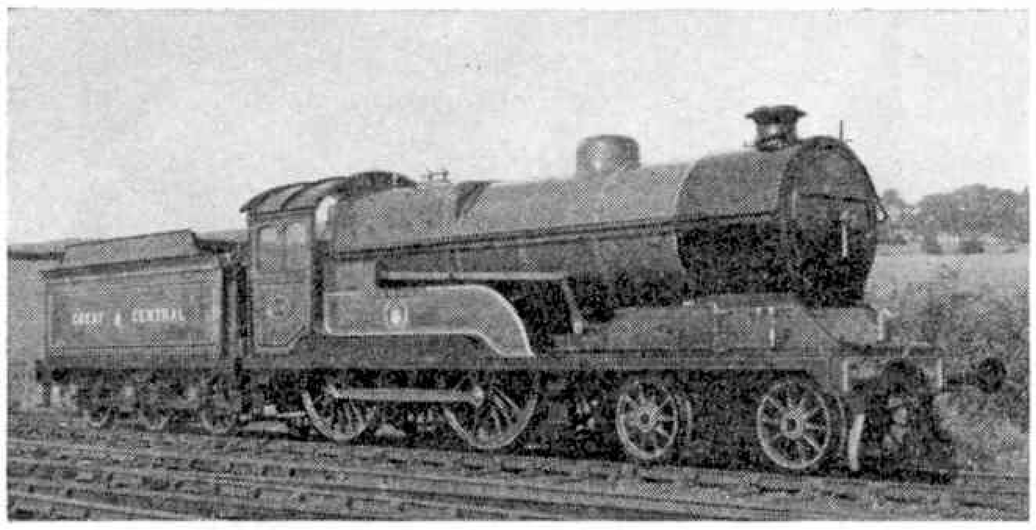
NEW ZEALAND

LANE'S TOY SHOP
75 High Street
ROCHESTER
Telephone: Chatham 41870

BUNKERS LTD.
P.O. Box 58
HASTINGS
Telephone: 84-283 (Mail orders welcomed)

THE GUILDFORD DOLL'S HOSPITAL LTD.
13 Swan Lane, GUILDFORD
Telephone: 61331

Spend a day in the past



It's all change at Clapham if you'd like to travel back in time. Because, here, at the Museum of British Transport—you can see history on wheels. Such giants of yesterday as 'Butler Henderson'—shown above—which once held iron sway over the old Great Central tracks. Vehicles, too, of lesser pedigree . . . bone-shaking horse buses—trams which screeched like raucous birds. And, there are aristocratic things—sumptuous saloons created for Queens—a railway Director's mother-of-pearl pass. Even grim relics—notices threatening trespassers with transportation.

Yes, a visit to this exhibition is a fascinating experience—a marvellous idea for a Saturday or during the holidays.

It's open 10.00—17.30 Mondays to Saturdays

It costs 1s 6d for boys and girls under 15 years; 2s 6d for adults. Reductions for school parties.

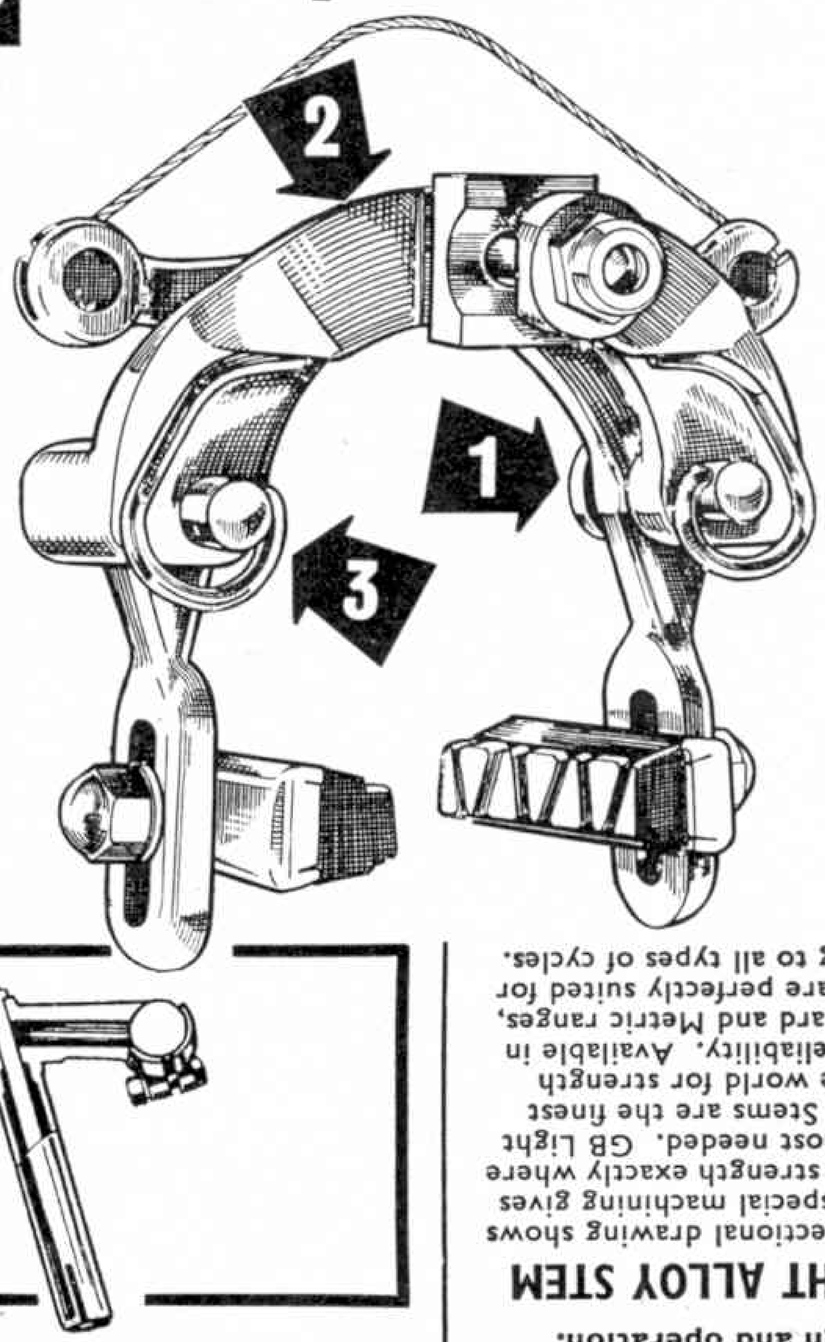
It's easy to get to: *By Underground:* Northern line to Clapham Common. *By Bus:* 35, 37, 45, 88, 118, 137, 155, 181, 189 and *by Green Line:* 711, 712, 712A, 713, to Clapham Common station *or by British Rail:* Clapham (South London Line), Clapham Junction, or Balham, then by bus.

Visit also: The Railway Museum, York.
The Great Western Railway Museum, Swindon.

Museum of British Transport

Clapham High Street, London, SW4

Can you identify these GB components?



The sectional drawing shows how special machining gives extra strength exactly where it's most needed. GB Light Alloy Stems are the finest in the world for strength and reliability. Available in Standard and Metric ranges, they are perfectly suited for fitting to all types of cycles.

LIGHT ALLOY STEM

The sectional drawing shows how special machining gives extra strength exactly where it's most needed. GB Light Alloy Stems are the finest in the world for strength and reliability. Available in Standard and Metric ranges, they are perfectly suited for fitting to all types of cycles.

(1) totally enclosed nylon bearings (2) special section forged aluminium back plate (3) independent springs which operate the stirrups remotely through their pivots.

They all add up to a brake that's way ahead in design and operation.

ANSWERS:
COUREUR '66' BRAKE
world's top centre-pull brake, works tested—race proved. Has many famous and unique design features, such as

Designed for champions

If you want to be a real champion—and who doesn't?—take a tip from today's top cyclists and fit GB accessories. Full information on all components and spares in this famous range is in the fact-packed GB Catalogue, 1965. Send for your FREE copy today; write to address below or use the Reader Enquiry Service on page 52. (Please enclose 6d to cover postage).

GB brakes, handlebars and stems are extensively fitted to Carlton, Viking, Raleigh, Dawes, Elswick, Wearwell, and Falcon bicycles.

The finest name in
CYCLE COMPONENTS

GB CYCLE COMPONENTS LTD. (Dept. MM4)
HANWORTH TRADING ESTATE
FELTHAM, MIDDLESEX. (Tel: Feltham 4871)

Advertisement Enquiry Service
December

A list of advertisements in this issue of MECCANO MAGAZINE is given below. If you would like further information on any of the products and services advertised, please tick in the appropriate space, fill in the coupon and return to us.

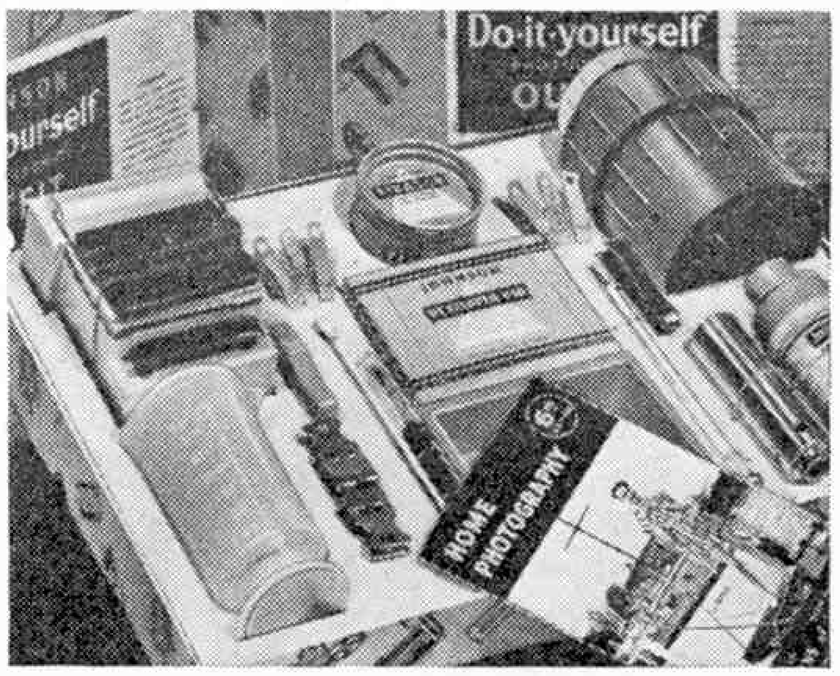
- ☐ Adana
- ☐ Basikits
- ☐ Beaumont Aviation
- ☐ Beatties of London
- ☐ Beck
- ☐ British Rail
- ☐ Blick
- ☐ Bell
- ☐ Bodley Head
- ☐ Concord
- ☐ Derritron
- ☐ Dunlop
- ☐ Evans
- ☐ Falcon
- ☐ Formoway
- ☐ Frog
- ☐ G. B. Cycles
- ☐ Granta Canoes
- ☐ H.A.C.
- ☐ Hattons
- ☐ Hales
- ☐ Harbutts
- ☐ Harrap
- ☐ Hinton
- ☐ Hohner
- ☐ Humbrol
- ☐ Johnsons of Hendon
- ☐ KeilKraft
- ☐ King Charles
- ☐ Kohnstam (U.P.C.)
- ☐ Malins
- ☐ Mellor
- ☐ Museum Press
- ☐ Marklin
- ☐ Morley
- ☐ Meccano
- ☐ Meccano (Powerdrive)
- ☐ Minic
- ☐ Peco
- ☐ Pergamon Press
- ☐ Playcraft (Champion)
- ☐ Playcraft (Railways)
- ☐ R.A.F. (A.T.C.)
- ☐ Railway Modeller
- ☐ Railway Magazine
- ☐ Percy the Engine
- ☐ Reardon Smith
- ☐ Radionic
- ☐ Romac
- ☐ Royal Navy
- ☐ Scalextric
- ☐ Sea Breezes
- ☐ Seccotine
- ☐ Smiths Accessories
- ☐ Stamp Club
- ☐ Subbuteo
- ☐ Superquick
- ☐ Thor Hammers
- ☐ Viking Cycles
- ☐ VIP Raceways
- ☐ Warne
- ☐ Webley & Scott
- ☐ Wills Finecast

To: Meccano Magazine, St. Alphage House, Fore Street, London, E.C.2.

NAME .....

ADDRESS .....

.....



DEVELOP AND PRINT YOUR OWN FILMS WITH A JOHNSON DO-IT-YOURSELF KIT

These easy-to-use kits come complete with chemicals, accessories, instructions and the "Home Photography" book. Stocked by good photo dealers. From 37/6 to 112/6.

JOHNSONS
OF HENDON LTD

use meccano magazine

Classified Columns for your Sales/Wants/Swops

MECCANO MAGAZINE is the best medium for selling your old train set, stamp collection or any other item which is no longer of use to you but of possible use to others Also, if you are short of an item for your collection, why not search for it by advertising in Meccano Magazine?

The cost is 4d. per word. (minimum 4s. 0d.) No box numbers. No trade ads.

Simply write each word of your advertisement in the spaces below (capital letters), cut out this quarter page and send it with your remittance to:— Classified Advertisement Dept., Meccano Magazine, St. Alphage House, Fore Street, London, E C.2.

Sales/Wants/Swops *(Strike out which is not applicable)*

1	2	3
4	5	6
7	8	9
10	11	12
13	14	15
16	17	18
19	20	21
22	23	24

If you require further words please continue on another sheet of paper.

THOR *soft-faced* HAMMERS

Ideal tools for the modeller and Handyman. For shaping metals, driving in bolts, fitting parts, use on chisels, and for all hammering jobs where damage to work must be avoided.

THORLITE Soft-faced HAMMER SET Ref. 616

Complete set in strong carton costs **22/6** and comprises hammer head (aluminium-alloy), 12 in. Ash handle with interchangeable rubber faces (2 in. dia.) of flat, dome, cone and wedge shapes.

THE JUNIOR THORLITE Ref. 612 For all light hammering jobs

Comprises an aluminium-alloy head fitted with strong Ash handle, one hard and one soft rubber face (dia. 1½ in., weight 10 oz.). The faces are extremely durable, but can be readily replaced when worn out.

Price **7/6.**

THOR COPPER HAMMER

With faces of the finest and softest grade of copper, firmly secured into a malleable-iron head. Gives a firm but safe blow.
Popular sizes: A—1 in. dia. x 1 lb. **8/6.**
1 —1¼ in. dia. x 2 lb. **13/9.**

Obtainable from any Halfords branch, model shop, or local tool-dealer. In case of difficulty direct from the maker, at above prices, post paid, against remittance.

A complete range of over 100 THOR "soft" hammers and mallets is available, including Rawhide, Copper, Nylon and other plastics, rubbers, hardwoods, etc. Send for detailed price lists.

THOR HAMMER COMPANY

HIGHLANDS ROAD, SHIRLEY, BIRMINGHAM Tel.: SOLihull 4695

STAMPS

Stamp Designs

There has been a good deal of grumbling about the designs of our own special issues, particularly the two values issued in honour of the late Sir Winston Churchill, and regarding this latter pair, the colours of the stamps pleased nobody. Pity, for now that our post office is really going in for the philatelic game (in other words to attract stamp collectors) in the long run, the attractiveness, or otherwise, will have considerable bearing on whether sales which have started well, are maintained. A very imposing panel exists to select the designs and colours. But it is hard to believe that we cannot do better than we have done up to the present. And yet you get countries like Austria and Greece, who simply cannot go wrong, and they do not do it by selecting designs which con-

tain even the kitchen sink, as one critic put it. For instance, Greece issued a set of three on September 11th, to commemorate the XXIV Balkan Games, and one of those stamps is illustrated. Note the simplicity of the design, yet it tells the full story, and as for the lovely colours, these go to make a real gem.

Philately

A lot of collectors seem afraid of the word at the heading, and it must be admitted that they do little about it. Actually, all it means in practice, is the art of stamp collecting, which is, and should be, something more than sticking stamps in a book as though they were cigarette cards. Recently, one who, though interested in stamps, does no more than buy, and then more or less forget his purchases, was telling me that he had been to the house of a friend, and to his surprise had seen a whole shelf full of books on the hobby. Didn't I think it strange, he enquired. My answer was that I thought it strange that he, who spent anything up to 50 pounds a year on the hobby, remained satisfied with even an out-of-date catalogue. I wish I could convince those collectors who never bother to read anything about their hobby, just how much they are missing. And also, think of all those philatelists who have spent months of their spare time preparing the hobby's literature. A thankless task really, with so many collectors ignoring their labours.

Omnibus Issues

Although I referred to these recently, as these lines will appear, whilst we are in the midst of two of them, I think I had better mention them again. We have just had one devoted to the 'I.C.Y.' (International Co-operation Year), but the one which is already arousing the most interest is the one devoted to the late Sir Winston Churchill. Already a number of foreign countries have joined in the philatelic venture and issued sets, as have one or two of Commonwealth countries, such as Australia, Canada and New Zealand. But the big splash comes January 24th when four stamps for each of 30-odd Commonwealth colonies, etc., will be issued. The single stamps which Australia, etc., have issued only cost coppers. But to buy the colonial omnibus sets (if I may still use the term colonial, to explain which stamps I am referring to) will cost getting on for a fiver, and those who can afford so much (leave me out) may be making quite a good purchase. But dealers will be offering the low value of each set, and these will come out a lot cheaper, so if you wish to have that great war leader represented in your collection, well short sets will fill the purpose.

Currency changes

The stamps of Australia, and dependencies such as Papua and New Guinea, Nauru, Norfolk Islands, Christmas Island, Cocos Island, and the British colonies Gilbert and Ellice Island, and Fiji Islands (hope I have got the lot), will all be changed in February, to coincide with currency changes.

Now this group of stamps has latterly grown very popular, and I am sure that there must be a number who read these notes (I know there is a number for I often hear from them) who collect them. So a word of warning. Many stamps which are current as these notes are appearing, and thus obtainable at current rates, will be obsolete in a short time and, due to their popularity, rise quickly in price, so do look to your blank spaces without delay. Put off buying that new album for a month or two and use the cash for the pleasant task of completing your sets. Albums will remain in abundance, when the stamps are scarce.

The Tip of the Month

Such is the growing interest in our own stamps, due to all the special issues, which the Post Office is releasing in these days, that I am going to suggest that whilst you can pick up the new stamps, as they appear in your local post office, don't waste any time about buying those stamps which appeared before the present rush, such as the KGVI special issues, and the early emissions of the present reign. They are still cheap, at least cheap as compared with what they will be when the new collectors taking up G.B. start going back a bit. Sets that I particularly like (comparing today's prices) are the Queen's Coronation issue of 1953 and the Jamboree set which followed in 1957. The Commonwealth Games issue of 1958 is due for a rise also.

F. E. Metcalfe

FINE STAMPS AT FAIR PRICES

and NO RUBBISH included in our BARGAIN DISCOUNT APPROVALS which offer a wide range of Br. Colonials only or Whole World in singles and sets. Only stamps catalogued by Gibbons included. SEND TO-DAY for a large trial selection. No "free gift" but we always pay outward postage. No obligation to buy

THE BIRKDALE STAMP CO., 104, LIVERPOOL ROAD, SOUTHPORT, LANCS. *NO CALLERS* *POSTAL BUSINESS ONLY*

GREAT BRITAIN

2/6, 5/- & 10/- (cat. 6/3) FREE

This packet of stamps is given absolutely **FREE** to all genuine applicants for my superior used British Colonial Approvals enclosing 4d. in stamps for postage. Overseas Applications Invited.

D. L. ARCHER (M),

2 LITCHFIELD WAY, BROXBOURNE, HERTS

100 FREE 100

Stamps to all collectors who request our approvals. (Please enclose 4d. postage).

GEE-KAY STAMPS

68 Holtspur Top Lane, Beaconsfield, Bucks.

THE MOST AMAZING FREE GIFT EVER OFFERED!

25 AUSTRALIAN STAMPS

5/- & 2/- Values included. Commemoratives Galore! All *FREE* to applicants for my bargain approvals. *Write now while stocks last and* Enclose 4d. for postage *Please tell your parents before replying*

S. Salmon (M1.)
119 Beechcroft Road, Ipswich.

SERIOUS COLLECTORS SHOULD SEND FOR SELECTION OF FIRST-CLASS APPROVALS STATING CHIEF INTERESTS

H. B. LANG, 3 Brooklyn Avenue
South Norwood London, S.E.25

P.B.K. CANOES

Plans, Materials, Accessories, Dinghy Fittings and Sails

G. G. HINTON (6), Milton St., Fairford, Glos. S.A.E

British Colonial Approvals, sent on 14 days approval. Single Country Books if preferred. Satisfaction and personal service guaranteed.
Ashford, 31A Disraeli Road, Putney, London, S.W.15

CIGARETTE CARDS—Ill. Cat. 2/9. 25 Cards 1/-. 250 Cards (Sets & Part Sets) 6/9, 500 13/-, 1000 25/-. New B.C. Stamps Details S.A.E.
T. H. SMITH, Wick Farm, Langport, Somerset.

BUY • SELL • SWOP • BUY • SELL • SWOP • BUY • SELL • SWOP • BUY • SELL • SWOP

SWOPS

• Large Scalextric Set, will exchange for Hornby Tri-ang Train Set; many extras. Write for details: Trevor Mapstone, 21 Lyndale Avenue, Bridgwater, Somerset.

WANTS

• Meccano Magazines, pre-1935, cash or exchange our 2-rail H/D track. 22 The View, London, S.E.2.
• 4 Channel segments part No. 119; Meccano Magazines for :— September, November 1924, November 1928, February, April, May, June 1934, and March 1937. J. B. Forster, 5 Denver Road, Latchford, Warrington, Lancashire.
• Pre-War Meccano Magazines. Particularly 1916-1922, bound copies any years, manuals, the book Frank Hornby, The Boy Who Made a Million! Obsolete parts. Originals only. 50 Blundell Avenue, Horley, Surrey.
• Pre-war Dinky Trains and Tootsie toy cars. Gilmour, 16 Great Lawn, Ongar, Essex.
• Pre-war trains and other toys or relevant data sought by enthusiast. Butler-Edwards, 1 Chesham Crescent, S.E.20.
• Pre-war 0 gauge, electric or clockwork. Robinson, 3 Dennis Parade, London, N.14.
• Obsolete Dinky toys, etc.; highest prices, single or collections. Pinnock, 6 Stream Farm Close, Lower Bourne, Farnham, Surrey.

SALES

• Large accumulations M.M.'s Railway magazines, Trains Illustrated, Hobbies Weekly, Do-it-Yourself, National Photographic, Wide World, many soccer, athletics, and general sports magazines. 10,000 to clear, reasonable :— E. Jones, 43 Dundonald Road, Colwyn Bay, Denbs.
• Merit racing Derby, Bells motor racing, Escalado, Soccerette. Offers. A. Perkins, 19 Fawn Road, Chigwell, Essex.
• M.M.'s 12/1944, 3/1945, 1/1959. Offers. Howard, 54 Bewerley Street, Leeds, 11.
• Minic Motorways Europa Set with extra track, £2. Barber, 5 St. Peters Close, St. Albans, Herts.
• Hornby Dublo train set. 2 rail layout mounted on 6 ft. × 4 ft. board. 3 engines, quantity of rolling stock and accessories, £20 o.n.o. W. F. Key, 65 Coleherne Court, Old Brompton Road, London, S.W.5. Fremantle 5742.
• Optikit No. 1, never used, £6 10s. 0d. Stutter, 2 Station Road, Hampton Wick, Kingston, Surrey.
• Circuit 24 set T Accelerators; need re-wiring also needs pick-ups. Spare tyres and back axle included. Offers over £4 10s. 0d. Liddle, 41 McDonald Road, Edinburgh, Scotland.
• Philips Stella tape recorder, 2 track, mike, 3 reels, hardly used £12 10s. 0d. Stutter, 2 Station Road, Hampton Wick, Kingston, Surrey.
• First day cover service. Book now for United Nations. (25.10.65) 2/6d. I.T.U. (15.11.65) 3/6d. Maclean, 53 Rannoch Drive, Bearsden, Glasgow.
• Retiring Pre-war oddments, L.N.E.R. Gas Lamps, Speed boats magazines, Rails. Graces, 74 Allerton Road, Liverpool, 25.
• No. 9 Meccano set with lots of spares including No. 1 clockwork motor—sectioned wooden case with lift-out tray. Also Meccano Magazines 1959-1964 (inclusive) October 1964 missing. Offers. Drummond Cowie, 6y Farmcombe Road, Tunbridge Wells, Kent.
• M.M.'s 1943-63 complete, except August 1959. Also 1934 complete. 1942 and 64, 7 months each. Offers. Jarvis, 3 John Street, Greenock.
• M.M.'s bound. 1926-1930, 1934-1952. Offers. Rose, 6 North Drive, Sutton Coldfield, Warwickshire.
• For Sale Hornby 00 lay-out, two loco's, rolling stock, 36 ft. track, transformer, £8. 1 Belmont Close, Woodford Green, Essex.
• "M.M.'s" bound copies 1934-1962, Railway Wonders of the World, 1935 (3 vols.) perfect condition. Offers. Lambert, 115 Bournemouth Road, Chandlers Ford, Hants.
• Railway tickets for sale. Send s.a.e. for list. Rampley, 39 Meadway, Hough Green, Widnes, Lancs.
• Giant Meccano Set—makes biggest models—Grandfather Clock, 6 ft. Blocksetting Crane, first class condition throughout, with manuals and motors, in self-contained drawer unit, £30. Thomas, 138 High Street, Wollaston, Stourbridge, Worcs.
• Meccano No. 9 with many accessories, making nearly set 10. Good condition, £8. 19 Market Place, Abingdon. (Phone: Abingdon 1649).
• Look! 113/- value for 49/6d. New Hornby Dublo 3-rail "Co-Co" diesel and eight new curved rails. Makers guarantee. Hull, "Red Gables", Worthfield Road, Dewsbury.
• M.M.'s 1942-1957 inclusive (one missing), £5 or 7/6d. per year. Worcester, 29 Barons Court, Church Lane, Kingsbury, London, N.W.9.
• Large amount Scalextric track, including Goodwood chicane and two cars. Good condition. Write for details: Zealley, 83 Vicarage Road, Watford, Herts. Phone Watford 28954.
• Hornby Dublo 2-rail 2-8-0, S.N.F.C. Bo-Bo electric, Co-Co diesel, all good condition, 60/- each. D. K. Halfacre, 56 Minley Road, Farnborough, Hants.
• World stamps 50-3/-, 100-5/9d. Rampley, 39 Meadway, Hough Green, Widnes, Lancs.
• Bargain approvals G.B., colonials or World: P. Fletcher, 9 Hood Street, Northampton.
• Large Pre-war Meccano, wooden case, many obsolete parts, 1928 manual. S.a.e. for details, Bullerwell, 54 Hawne Lane, Halesowen, Birmingham.
• Lone Star Goods 57/6d., passenger 57/6d., Tri-ang Co-Co 42/6d. Sunner, 22 The View, London, S.E.2.
• Dinky and Corgy toys collection, s.a.e. for list. Oakley, 34 Fir Tree Avenue, Knutsford, Cheshire.

Educational

City of Cardiff Education Committee

REARDON SMITH NAUTICAL COLLEGE, FAIRWATER, CARDIFF

Principal:
Capt. J. N. Rose, R.D., J.P., M.I.N., Master Mariner

PRE-SEA TRAINING

This Residential College provides courses as follows:—

(a) A one-year course of Phase I towards an Ordinary National Diploma in Nautical Science—with Phases II & III after the young man goes to sea. Four passes at 'O' Level required including Mathematics, English and Physics or some comparable subject.

(b) A one-year course for those not eligible for (a). Passes in Mathematics and English at least are very desirable but not essential; opportunity exists to take these subjects at the College, provided a candidate's ability is such that he can reach the necessary standard.

Each course leads to NINE months Remission of Sea Service.

Fees for residence and tuition £180. Grants are available from Local Education Authorities and certain other channels.

Prospectus and further information may be obtained from the Principal (address as above).

Robert E. Presswood, Director of Education, City Hall, Cardiff.

Classified Advts. continued on page 56

THE LIGHTWEIGHT CYCLE

Falcon

WRITE FOR 1965 CATALOGUE:-

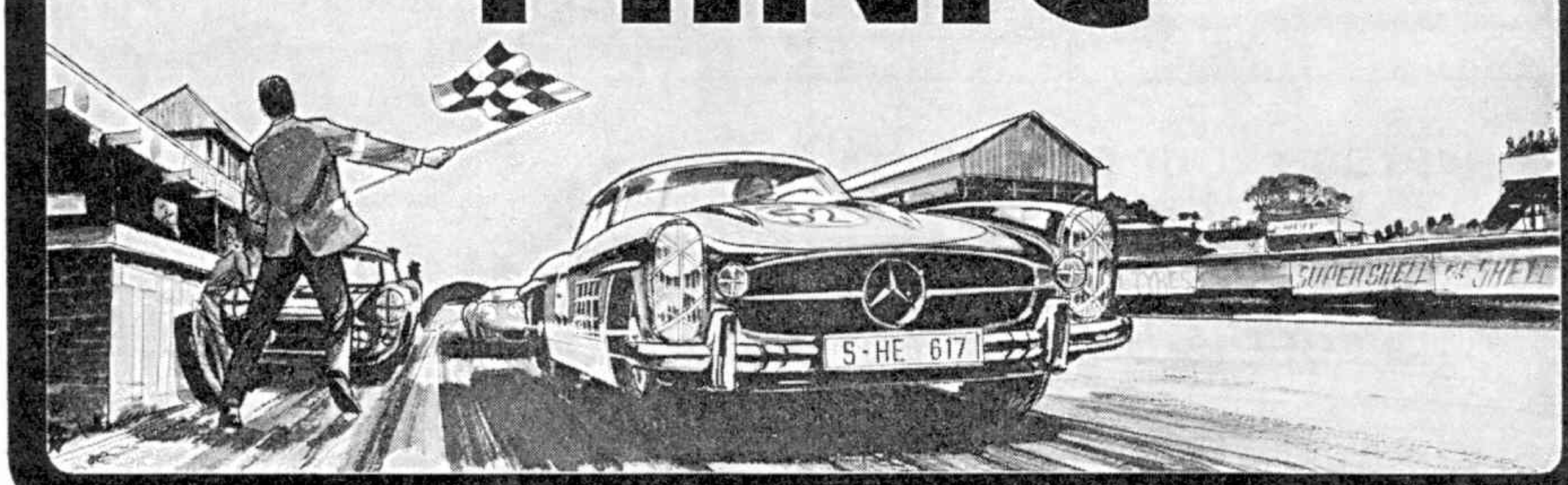
THE "CYCLE OF THE YEAR"

1965 "SUPER ROUTE"

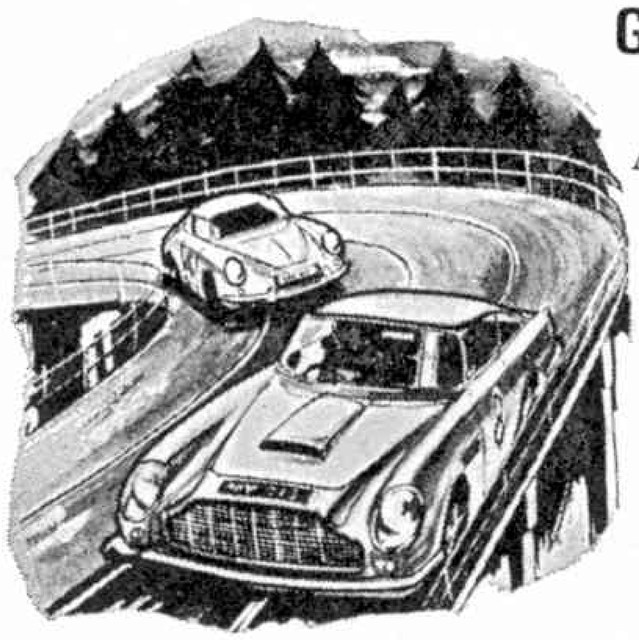
with CENTRE-PULL BRAKES, WIDE FLANGED HUBS, 531 TUBING, HIGH PRESSURE WHEELS, 5 SPEED HURET/ALLVIT GEAR. **£27 19 6**

FALCON LIGHTWEIGHT CYCLES, WILLS STREET, SMETHWICK, STAFFS.

Go motor-racing with MINIC

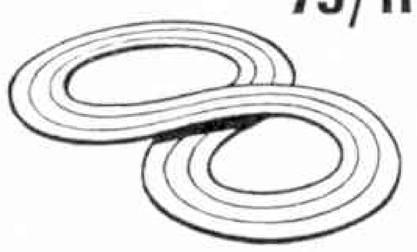


GRAN TURISMO



You get:
Aston Martin DB4 G.T.,
Porsche Carrera G.T.,
'over-and-under' figure
of eight track and
two Speed Controllers.
Area—32″ x 26″.

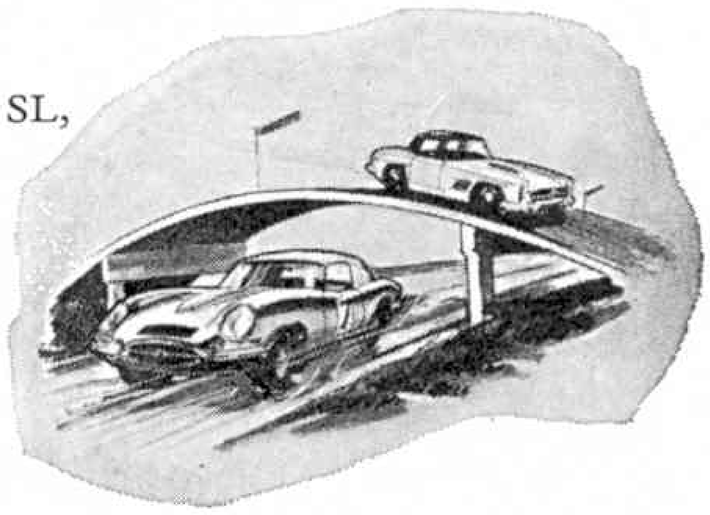
79/11

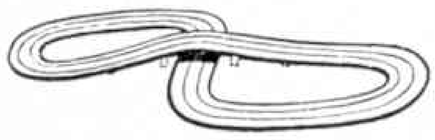


EUROPA

You get:
Mercedes Benz 300 SL,
'E' Type Jaguar,
large figure of eight
track with Hump
Back Bridge and two
Speed and Direc-
tion Controllers.
Area—50″ x 26″.

113/6





TROPHY Accessory Set

Add authenticity to your Minic layout with this super value-for-money Set.
You get: 1 Racing Pit, 1 Dunlop Foot Bridge, 1 Set of Flags, 4 Pieces of Fencing, 10 Clip-on Bases, 2 Extra Flag Poles, 1 Self-adhesive Banner. **19/6**

INTERNATIONAL Extension Set

Put more excitement in your racing with this Set.
You get: 1 Racing Pit, 1 Automatic Starting Gate, 3 Standard Straights, 1 Straight Chicane, 1 Set of Flags, 4 Pieces of Fencing, 8 Clip-on Bases. **33/-**

MINIC LIMITED, CANTERBURY, KENT

Triang PRODUCT

Radio

HEAR ALL CONTINENTS
WITH H.A.C. SHORT-WAVE RECEIVERS

Noted for over 25 years for . . .
S.W. Receivers of Quality

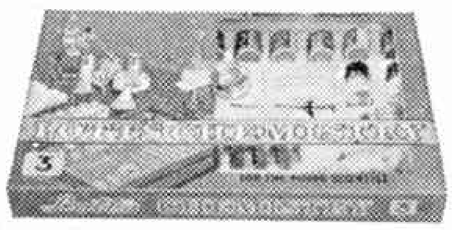
Improved 1965 Models now available . . . provide even more startling results.

One-Valve Model "CX" . . . . . Price 34/6
Two-Valve Model "E" . . . . . Price 52/6

All kits complete with all components, accessories and full instructions. Before ordering call and inspect a demonstration receiver, or send stamped addressed envelope for descriptive catalogue.

"H.A.C." SHORT-WAVE PRODUCTS
(Dept. M.M.), 44, Old Bond St., London, W.1

Chemical Spares



LOTT'S CHEMISTRY APPARATUS

Endless interest! Build your laboratory with spare apparatus and chemicals always available. Write for price list enclosing 3d. stamped addressed envelope.

LOTT'S BRICKS LTD. Dept. MC3 Watford Herts

Canoes

BUILD YOUR OWN CANOE
with the new Laminated/PVC covering

Full-size Plans and Instructions		10s. 0d.
Complete Kit of Parts from	£13.	15s. 0d.
or Ready Built Canoes from	£18.	0s. 0d.

Catalogue FREE from
GRANTA CANOES · COTTENHAM · CAMBRIDGE

Railways

HORNBY-DUBLO 3 RAIL BARGAINS
All in perfect condition—2/6/4 Tank locos **45/-**, Bo-Bo Diesels **45/-**, Co-Bo Diesels **57/6**, S.R. Motor coaches **55/-**, Duchess Montrose and tenders **50/-**, Silver Kings **50/-**, 0/6/2 Tanks **25/-**, Straight rails **1/6**, curved rails **7/6** dozen, large radius curves **2/-**, Half rails **1/-**, uncoupling rails **5** for **10/-**, electric uncoupling rails **5/-**, electric points **12/6**, Royal Mail sets **25/-**, 2 RAIL ITEMS —Barnstaple and tenders **79/6**, 0/6/2 Tanks **39/6**, Bo-Bo Diesels **50/-**, Co-Bo Diesels **57/6**, Co-Co Diesels **57/6**, S.R. Motor coaches **55/-**, French type electric locos **70/-**, rails **1/-**, electric points **12/6**. Postage **2/6**. Part Exchanges.
HATTONS, 180 Smithdown Road, Liverpool, 15

Journals

"SEA BREEZES" FAMOUS SHIPS, by J. H. Isherwood. Six sets of six cards, 10"×8", each card featuring a coloured line drawing (to scale) of a famous merchant ship, together with full details of her construction, machinery and an outline of her career. Each set costs 6/- post free; among the ships featured are the **Aquitania, Mauretania, Titanic, Baltic, Rawalpindi, Statendam, Scot** and many more—36 in all. A special display album is also available to hold four sets, and costs 25/- post free. Send for your sets of FAMOUS SHIPS and display album now to Sea Breezes, 17 James Street, Liverpool, 2.

Advertise your private Sales and Wants in Meccano Magazine
The cost is only 4d. per word

50 YEARS YOUNG

In January MECCANO MAGAZINE celebrates its 50th birthday. A GOLDEN JUBILEE such as this cannot be allowed to pass without notice, and next month's issue will therefore be a very special one.

With it we are giving away ABSOLUTELY FREE, a FULL SIZE PLAN for a 24" MODEL POWER BOAT!

No ordinary boat this, for it can be built to represent four different very famous full size racing craft. It can be electric or diesel powered, and if you wish, radio controlled. In the January and subsequent issues, there will be full details of all these variations. This is 'PROJECT 66'. *Phase 1* will deal with the construction of the basic hull.

order your January Meccano Magazine now!
there will be a terrific demand

Scalextric at the Party from page 16

drivers, these hazards can hold up the whole proceedings and it is far better to provide a second smaller circuit purely for the real enthusiasts. After all, 'L' drivers are not allowed on the Motorways, are they?

Make sure that you have enough stewards. Drivers reaching over to grab at their own cars not only tend to end up with an argument but too often it interferes with the vision of other drivers and slows down the game. Suggest that each driver carries out the job of steward before he is permitted to race In this way everyone takes their turn and the event will run more smoothly.

Organise your event. What would Brands Hatch or Silverstone be like without organisation? Everyone, both drivers and spectators, get more fun from Scalextric when the events run smoothly and efficiently — spectators do not want to watch drivers squabbling over the number of laps raced and the drivers themselves should be driving their cars and not counting the laps or replacing vehicles.

If the racing is going on for some considerable time, don't forget to give your cars a rest. They will tend to get hot, especially if being used by inexperienced drivers, drivers who continually have their hand throttle pressed to its limit. Try to have a spare set of cars so that when they show signs of overheating, you can take them into the pits for a period—this will also give you the chance to inspect the pick-ups and gear assemblies for dirt and dust.

Finally, when you have finished racing for the day, collect everything together and pack it away. Bits and pieces of track left on the floor soon get damaged and the performance of cars does not improve if they are soaked in Coke. Put everything away, and as soon as possible afterwards go through it all checking and cleaning.

Have fun this Christmas with your Scalextric.

DOUBLE YOUR ADHESIVE POWER WITH SECCOTINE

Use either new No. 2 P.V.A. Seccotine for most plastic or household uses. Fast setting, oil-proof, waterproof and heatproof.

STILL ONLY **1'6** PER TUBE

Or Standard Seccotine—indispensable to every handyman for over seventy years. Its sheer adhesive power is known everywhere.

STILL ONLY **1'3** PER TUBE

Sole Manufacturers:
McCaw Stevenson & Orr Ltd. Belfast

HAVE YOU A 2-RAIL LAY-OUT?

Then try just one FLEISCHMANN loco—prices from 58/11 to £9—will run on any 2-rail track—negotiate any 2-rail point—and will give a power and smoothness of control that will amaze you.

1965/66 CATALOGUE 2/9 inc. post

KING CHARLES SPORTS CENTRE
MODEL RAILWAY SPECIALISTS
RAILWAY HOUSE,
18 KING CHARLES STREET, LEEDS, 1.
Tel. 26611

There's always such a *lot* in

RAILWAY MODELLER

2/6 monthly

Don't miss December —It's great!

ON SALE Nov. 25th

PECO PUBLICATIONS LTD · SEATON · DEVON

GAMAGES

Boy's . . . tell your Dads!!

NEW SPORTSMAN CYCLE

With STURMEY-ARCHER 3-SPEED GEAR

All Competition Beaten
BRITAIN'S BEST VALUE!

ONLY **16 GNS**
or 51/- Deposit & 12 Monthly Payments of
25/-
(Total £17.11)

Ladies Model (with Chainguard). 19 or 21 in. Frame **Only £17.5.0 or 52/- Dep. and 12 Mthly. Pyts. of 25/9** *(Total £18.1.0).*

CARRIAGE PAID Great Britain (Mainland)

A huge contract with a well-known maker enables us to offer this superb quality cycle with first-class specification, at this sensationally low price.

Light and sporty in design, gay in colour for the younger appeal. Specification: Gent's sizes 19", 21" or 23". Finished in attractive Blue enamel with double gold lining. Fully brazed frame with quick-release front and rear fork ends. 26 in. × 1⅜ in. wheels fitted with Michelin Zig-Zag tyres. "All Rounder" handlebar with adjustable stem. Tan mattress-type saddle. Caliper brakes. Sports pattern mudguards. Rubber pedals. Sturmey-Archer 3-Speed Gear.

CYCLE AND ACCESSORY LIST FREE on request.

GAMAGES, HOLBORN, LONDON, E.C.1. **HOLborn 8484**

ALL FREE

OVER **200** STAMPS **PLUS** THE FAMOUS

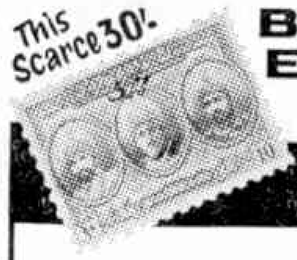
PENNY BLACK

& CAPE TRIANGULAR FACSIMILES

The 1840 British "Penny Black" is valued £28 unused, and the 1853 Cape of Good Hope "Penny Red Triangular" is valued £17 upwards mint. Few collectors can afford originals of these rare British Empire classics but we will send you exact colour facsimiles of these two valuable stamps ABSOLUTELY FREE, plus a special imported collection of 200 ALL-DIFFERENT world stamps, all genuine and catalogued over 35/-. Just ask to see our new Special Approvals. (Please tell your parents.)

UNIVERSAL STAMP CO. (Dept. MM6)
Eastrington, Goole, Yorks.

This Scarce 30/-



BRITISH EMPIRE MINT HIGH VALUE FREE

This 1948 Bahawalpur (Pakistan) High value commemorative has a face value of 10 rupees (15/-) and is catalogued at 30/-. This stamp comes free to you when you ask to see our book of special approvals which are of truly wonderful value (no need to buy any!)

THE STAMP CLUB
(Dept. M.M.3)
Eastrington, Goole, Yorks.

Keep your

meccano magazine

in good condition

Special Binders are available

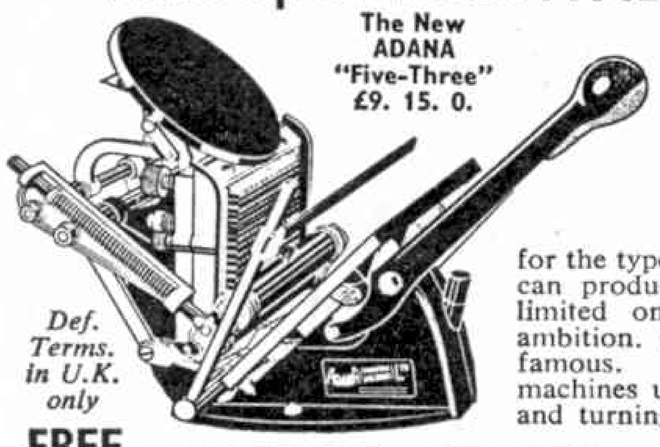
Price **10s.**

Send postal order to:

Meccano Magazine
St. Alphage House, Fore St., London, E.C.2

AMBITION AND ADANA

Adds up to PROFITABLE PLEASURE



The New ADANA "Five-Three" £9. 15. 0.

Def. Terms. in U.K. only

If you are looking for a really absorbing, instructive hobby and have the ambition to earn EXTRA CASH then start to get ahead NOW—by PRINTING at home with an **ADANA!** Your customers are all around you, waiting for the type of printing jobs the **ADANA** can produce. The potentialities are limited only by the scope of your ambition. Adana machines are world-famous. They are real printing machines using standard printers' type and turning out first-class work.

FREE

A sample of real printers' type, as used in **ADANA Machines** for all who write for details.

ADANA LTD (Dept. MM27)
15/19 Church Street, Twickenham, Middlesex
London Branch: 8 Grays Inn Rd., W.C.1.

DON'T BE BULLIED

Get tough double quick. Morley Lightning-quick Ju-Jitsu Course shows how. Make any attacker helpless in a flash with your bare hands. Easy to learn; quick Jap combat tricks, and all knock-out blows. Fear no-one. Full 48-lesson course only 10/- post paid. Satisfaction or money back.

Develop Powerful Arms Course 3/6, **Powerful Chest** 3/6, **Powerful Abdomen** 3/6, **Powerful Legs** Course 3/6, The 4 Courses 12/6. **Tricks of Self-Defence** and how to do them 5/-, **How to Conquer Nervous Fears** 3/6, **How to Develop a Perfect Voice** 3/6, **Boxing for Boys** 2/10, **Swimming in 12 Easy Lessons** 3/4, **Manual of Karate** 21/-

J. J. MORLEY, 28 (M.M.8) Dean Road, London, N.W.2.

3,000 Self-Help and "How" Books—List free.

FOR PERMANENT RESULTS . . .
MODEL IT IN

Plastone

Regd. Trade Mark.

—the self-hardening modelling material.

Send for sample tin and booklet 4/9 (including postage) to sole Manufacturers—

Harbutt's Plasticine Ltd., Bathampton, Bath, Somerset.

HORNBY DUBLO BARGAINS

NEW TRACK AT SECONDHAND PRICES

We bought the remainder of the Hornby 3 Rail stock and can still supply most items

NEW AT HALF PRICE

We have now bought a number of the 2 rail items which are not being included in the TRIANG-HORNBY range:

SEND 6d. FOR

BEATTIES BARGAIN BOOK

BEATTIES OF LONDON

112 High Holborn, London, W.C.1. **5 The Broadway, Southgate, N.14 (Mail Order)** **28 Corporation St. Manchester.**

CHEMISTRY

POSTAL OR COUNTER SERVICE — LIST FREE
CALLERS WELCOME — COME AND INSPECT
THE WIDE RANGE OF APPARATUS AND CHEMICALS AVAILABLE AT

A. N. BECK & SONS

60 STOKE NEWINGTON HIGH ST. LONDON, N.16. TEL. CLI 0335

35/-

MAKE "5" DIFFERENT RADIOS

Amazing Radio Construction Set! A complete Home Radio Course. No experience needed. Full instructions, Step-by-Step plan, all Transistors, loud-speaker, personal phone, knobs, screws, etc., all you need. (parts avail. sep.). Originally £6

NOW 34/- plus 3/6 p. & p.

AMAZING CIGARETTE RADIO

Holds 10 cigs.—yet cleverly conceals highly sensitive fully transistorised circuit (incl. batt.) Simple assembly. No soldering. No experience necessary Only 16 Connections. ALL PARTS for 18/6 plus 2/6 p & p.

NEW RADIO!!

Anyone can build in 2-3 hours! Only 19/6. Even the older children build them!... no soldering—only 16 connections! Bring in station after station. 4⅛" × 2⅜" × 1⅛". Many Testimonials:—*M.H. of Bradford writes: I am amazed how easy it is to build to a layman like me.* 19/6 plus 7.6 p. & p.

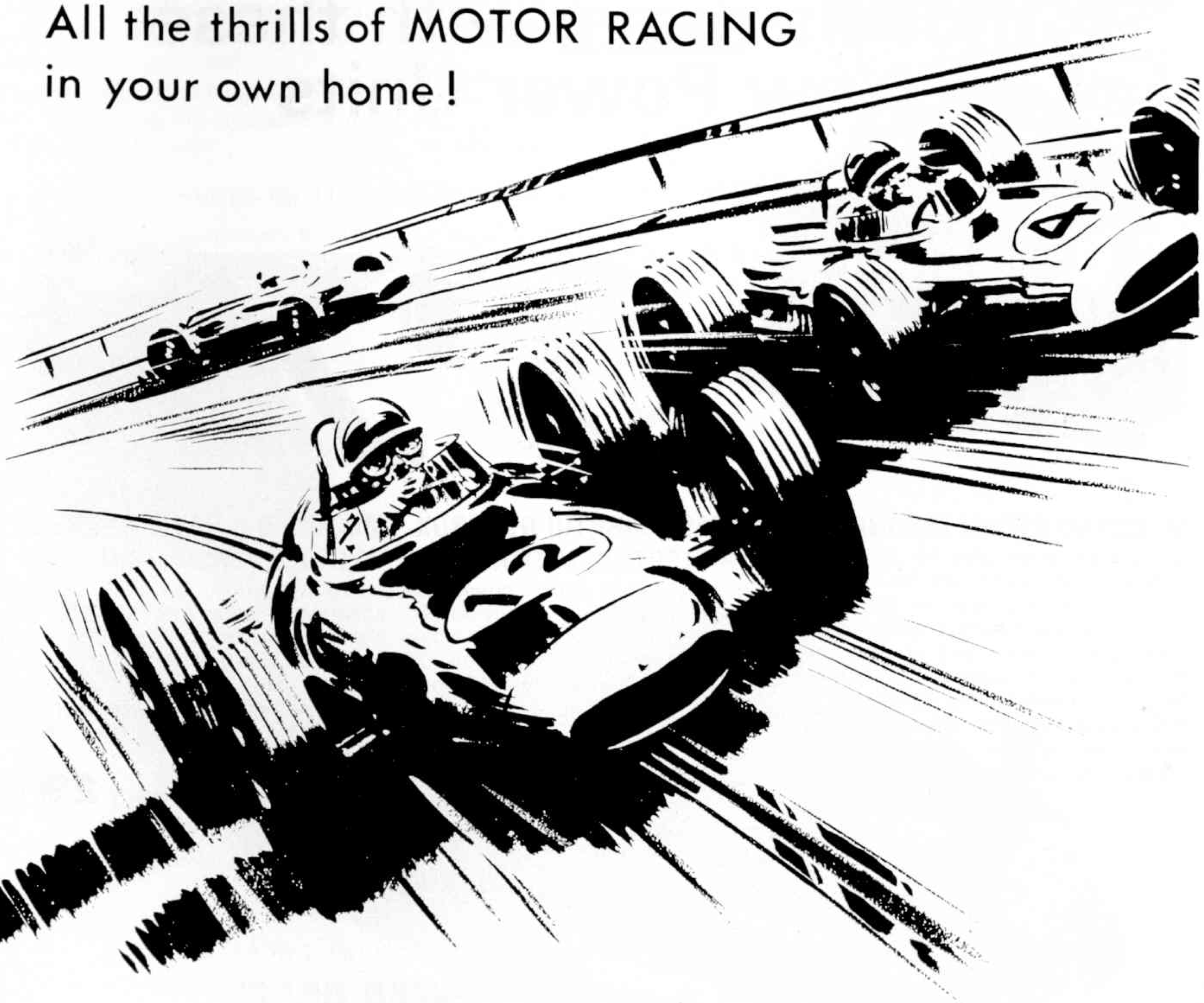
FOR ONLY 19/6

CONCORD ELECTRONICS LTD. (Dept. MM12) 9 WESTERN ROAD, HOVE.

SCALEXTRIC
REGD.

Model *Motor Racing*

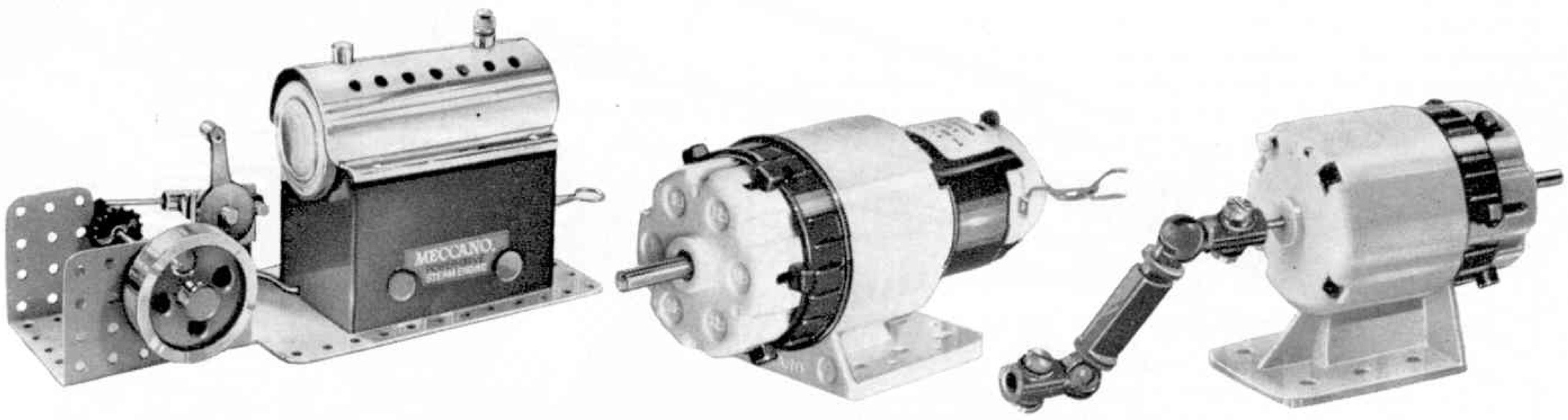
All the thrills of MOTOR RACING
in your own home!



See your dealer **NOW** for a full colour catalogue and full range of SCALEXTRIC sets!

FORWARD OR BACKWARD, UP AND DOWN, LIFT, SPIN, PULL, PUSH

make your **MECCANO** models <u>move</u> with these New Power Units



MECCANO STEAM ENGINE

What a fabulous idea for Meccano engineers to catch on to—super-efficient *steam power* to drive off gears, chains and pulleys! Working on methylated spirits and water, the Meccano Steam Engine has a single lever that operates the fly-wheel in forward *and* reverse directions, and also controls the running speed. Clean, safe, simple to operate.

ONLY 68/6

MECCANO 6-RATIO GEARBOX WITH ELECTRIC MOTOR

Now put 6-speed *electric* power into your Meccano models! Really powerful, sturdy and light, the motor works by 6-volt battery or 3-12 volt DC power supply. Speed range 115 r.p.m. to 2300 r.p.m. off-load at 6 volts. Forward/off/reverse switch. *The direct drive* gearbox transmission ratios are 3:1, 6:1, 12:1, 16:1, 32:1, 60:1. Gears may be changed while motor is running. Foolproof. Simple to operate. No maintenance required.

ONLY 49/6

MECCANO 6-RATIO GEARBOX WITH UNIVERSAL COUPLING

It's that terrific 6-speed gearbox again—this time with superbly designed universal coupling that enables you to drive it from any power source, using a standard Meccano $\frac{5}{32}$" diameter spindle. Ideal power units —Meccano EMEBO and E15R Electric Motors.

ONLY 29/11

at your toy shop now—in smart 'see-through' packs!

MECCANO® POWER DRIVE SERIES

COMPLETE WITH FULL INSTRUCTIONS FOR USE

Meccano Ltd., Binns Rd., Liverpool

Now a special clockwork/pushalong train set for the very young - PERCY THE SMALL ENGINE

The Rev. W. Awdry's lovable character brought to life by **MECCANO** ®

Percy is a very special, *famous* Small Engine.

Children everywhere share the amusing adventures of this cheeky little chap in the charming 'Railway Series' books by the Rev. W. Awdry.

And now you can have Percy all to yourself, just like he looks in those stories—same face, same colours, everything! Because Percy's here with his own train set!

The 'Railway Series' books by the Rev. W. Awdry are available from all good bookshops.

YOUR PERCY TRAIN SET HAS ALL THIS:-

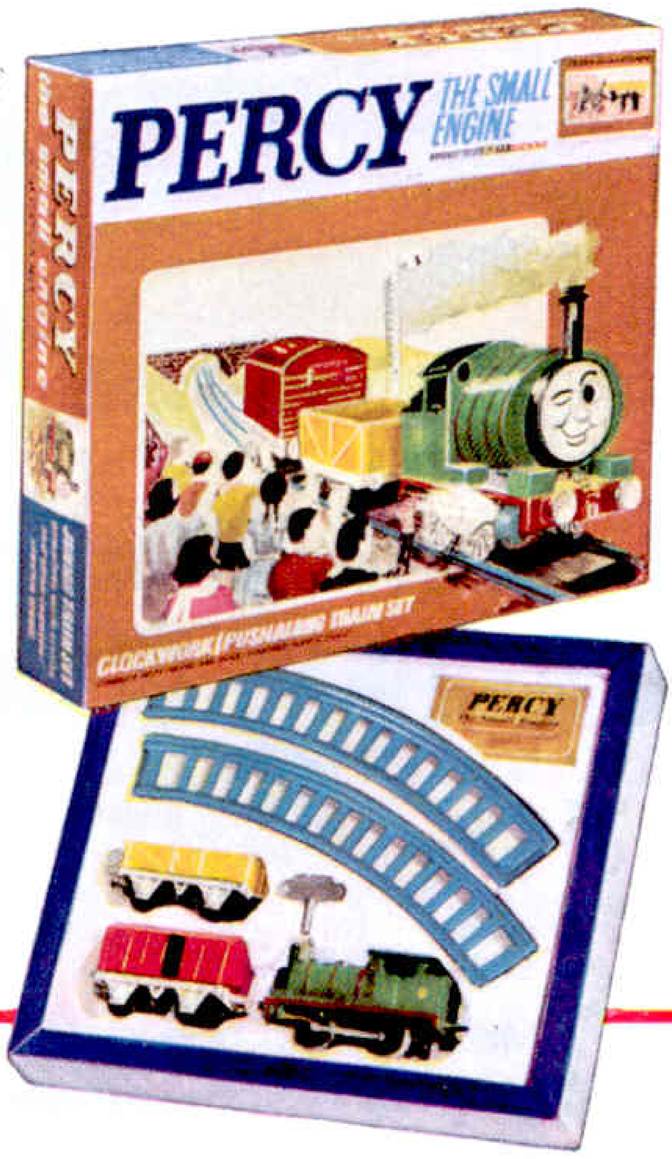
* Percy himself (large as life!) with a new long-running clockwork motor that can be free-wheeled backward and forward without damage.

* Open Goods Truck and Closed Goods Wagon with sliding doors.

* A brand new idea—rails simply click together, and are specially designed to make it easy to put Percy on the track. Track is 36" in diameter, and includes a brake device to stop the train automatically.

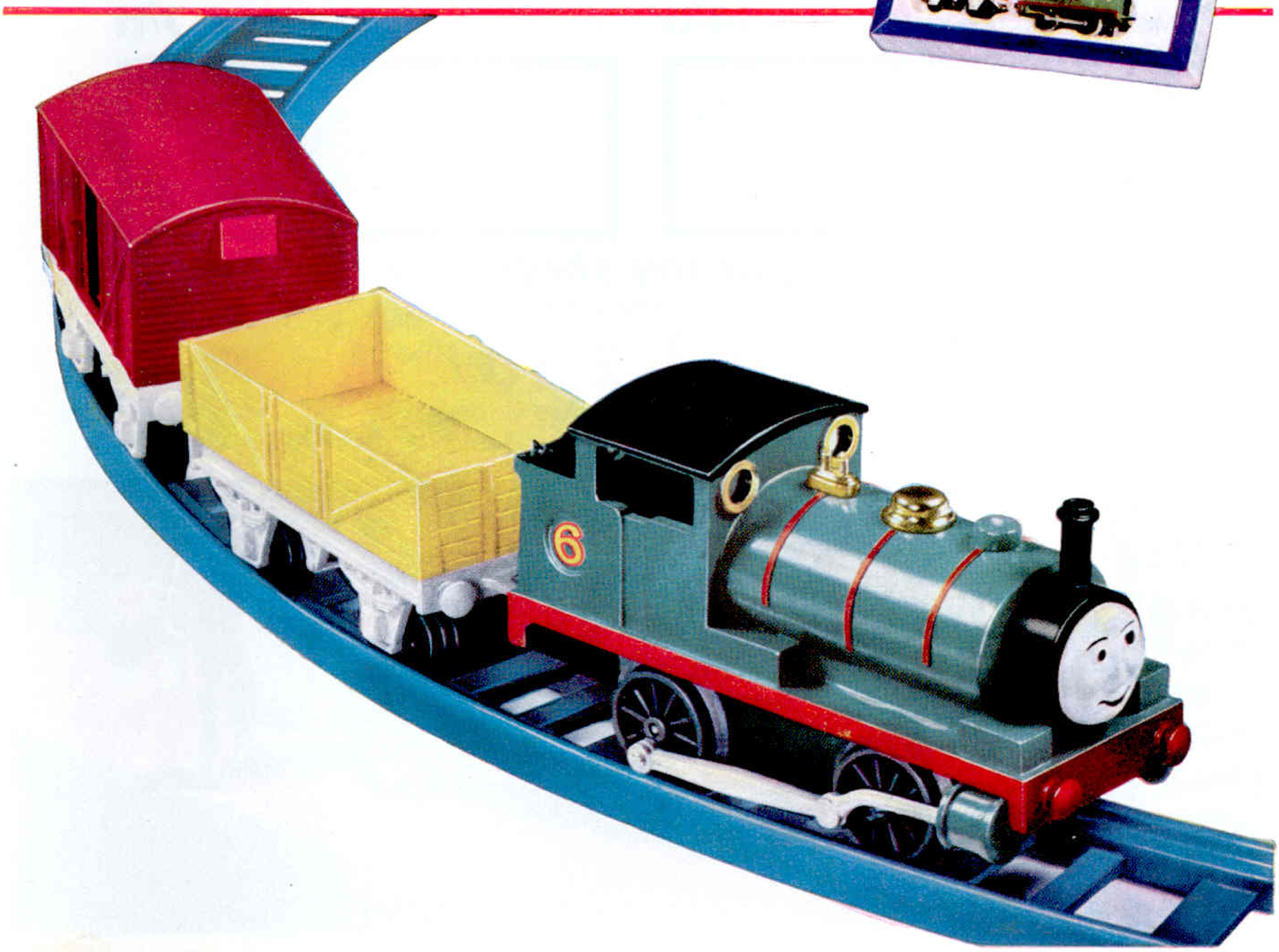
* Everything constructed in tough, gaily coloured plastic—safe, light, practical.

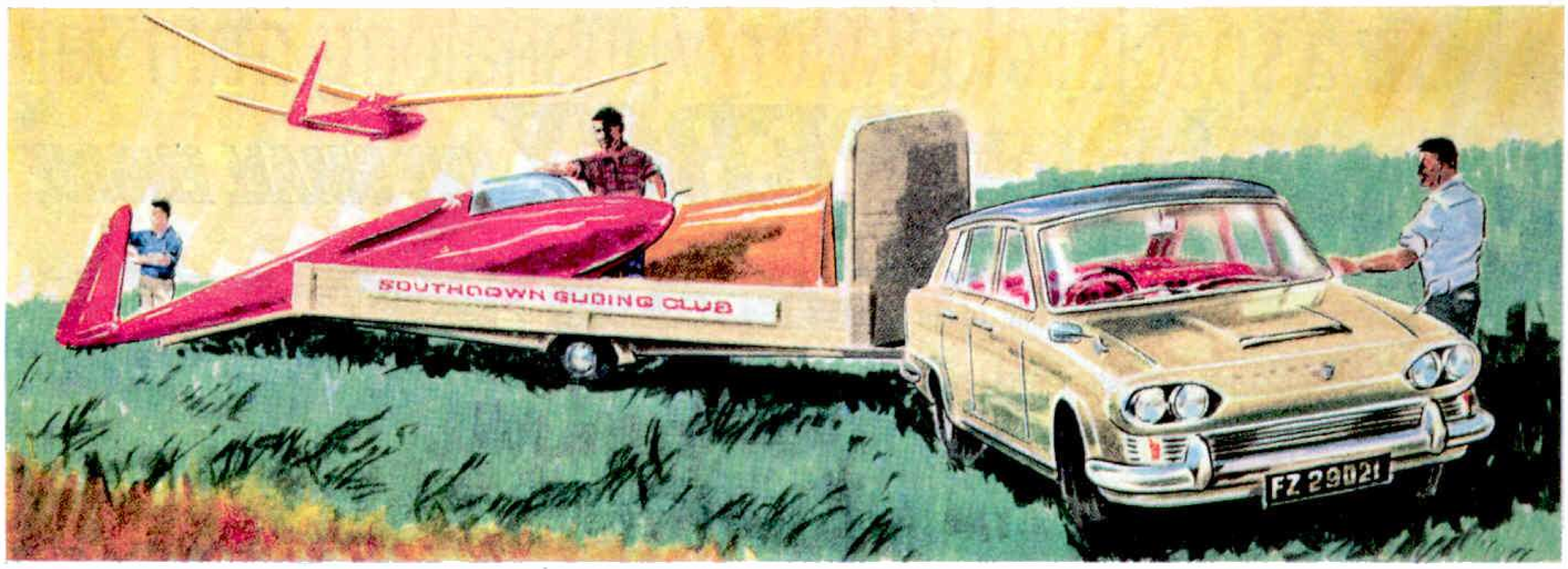
* Percy will also fit your standard "O" Gauge track.



COMPLETE WITH TRUCKS AND CLICK-TOGETHER PLASTIC TRACK **59/6**

From Hamleys, Harrods, Gamages, Selfridges and all good toy shops





THIS MONTH'S NEW DINKY MODELS

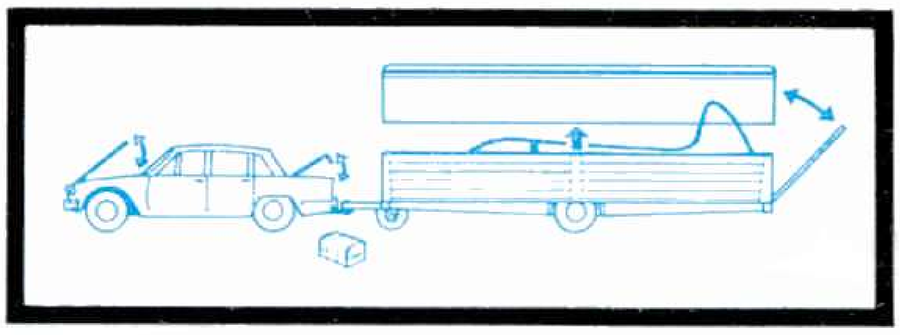
Tow-Away Glider Set • Fiat 2300 Station Wagon

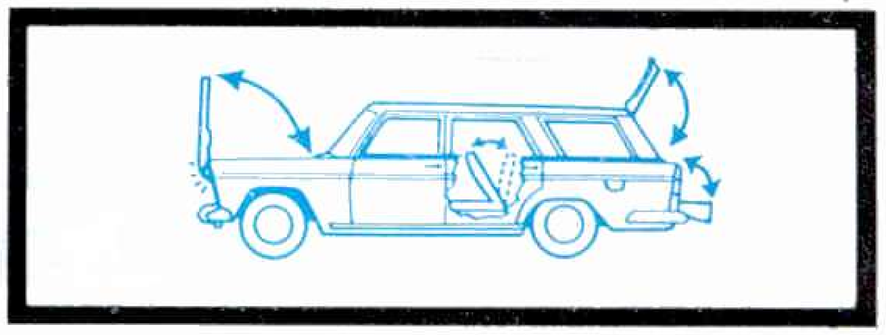
Includes TRIUMPH 2000 with opening boot and bonnet · Luggage · Prestomatic steering · All-round suspension · Red upholstery, blue roof, ivory body. TRANSPORTER carries glider · Removable transparent canopy · Drop-down tailboard · MODEL GLIDER EASILY ASSEMBLED FOR REAL FLYING TRIPS!

Model No.118 Overall Length 11¼" Price **14/11**

A great new luxury model from Italy, packed with fabulous Dinky features! Button-operated bonnet and detailed engine . Opening tailgates . Button-operated fold-flat rear seat . Steering wheel and red upholstery . 'Chrome' bumpers and grille . Twin jewelled headlights . Ivory body

Model No. 172 Length 4¼" Price **7/11**





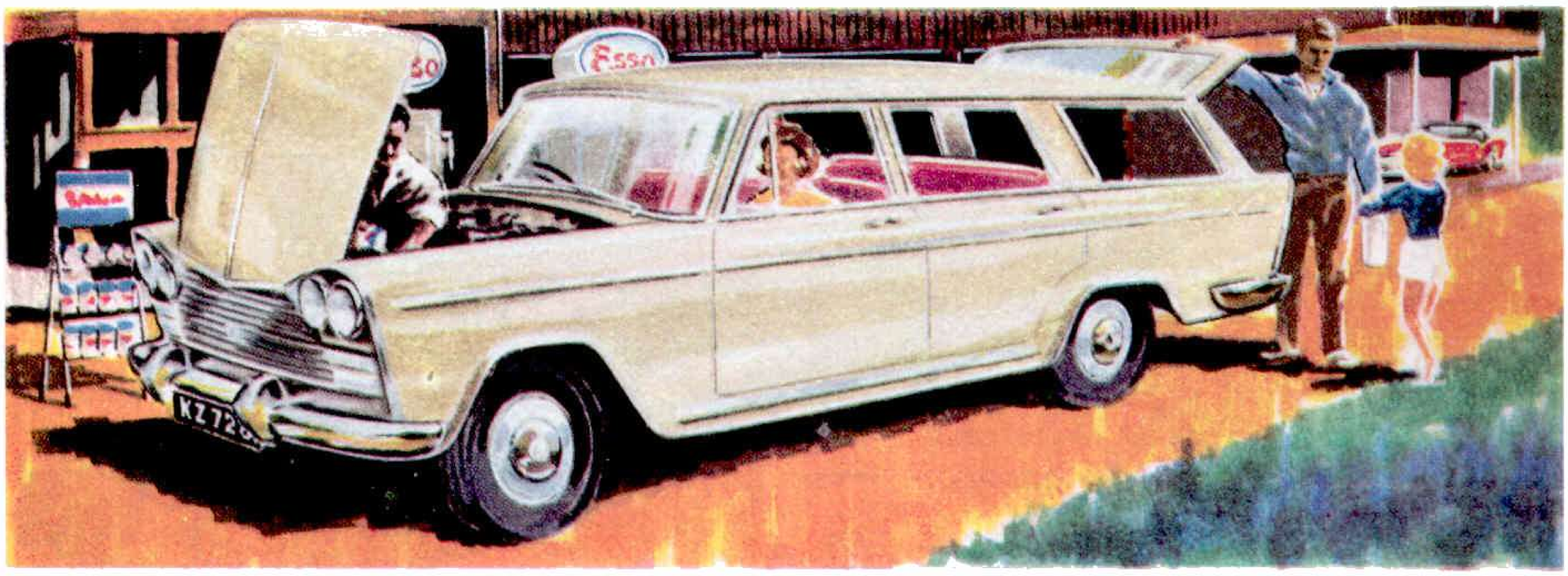
At your toy shop now

Always something new from

DINKY TOYS®

PRECISION DIE-CAST SCALE MODELS

From Hamleys, Harrods, Gamages, Selfridges and all good toy shops. Manufactured by Meccano Ltd., Binns Rd., Liverpool



Published by Thomas Skinner & Co. (Publishers) Ltd., St. Alphage House, Fore St., London, E.C.2. Printed by James Cond Ltd., Charlotte St., Birmingham 3